THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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JANUARY, 1870.

"JANUARY! Darkness and light reign alike. Snow is on the ground. Cold is in the air. The winter is blossoming in frost flowers. Why is the ground hidden? Why is the earth white? So hath God wiped out the past; so hath He spread the earth like an unwritten page, for a new year! Old sounds are silent in the forest and in the air. Insects are dead, birds are gone, leaves have perished, and all the foundation of soil remains. Upon this lies, white and tranquil, the emblem of newness and purity, the virgin robes of the yet unstained year!"

JANUARY, with stately march, commences the grand rounds of the Seasons for another Year. Let us enter the course with a determination to explore their recesses with more earnestness and fidelity than ever before, and store the mind with varied and useful knowledge. Knowledge that will not only confer happiness upon ourselves and those about us, but will tend to lessen human toil, to spread our fields with abundant crops, and to fill the pocket of the farmer with those "*rocks*" upon which a great many men split, but which, in the hands of the cultivator of the soil, usually bring comfort and convenience.

Winter is upon us; mid-winter. Perhaps the snow lies deep in field and forest; too deep for comfortable chopping or safe teaming. Perhaps the January thaw has flooded icy roads; the south wind is drifting worlds of vapor to the north, or is gradually veering round to give us a nor'wester to-morrow that will make all loose things clatter again. We cannot tell. Obliged to anticipate, we lose something of the inspiration which might be caught, if writing these notices of the Months amidst their peculiar characteristics.

While Nature has her sway out-of-doors, let us look back and see how our ancestors regarded the opening of the New Year, and what they did to give it significance and remembrance.

Scarcely any themes have been more charmingly sung by our English ancestors than those of the opening New Year, Christmas, winter scenes and firesides. Many of their peculiar customs were common far back in history, and are enumerated in records of antiquity. Among the foremost of the noisy observances, was the practice of *ringing the bells*. All over merry England, through every valley, and reverberating from every hill top, was the sound of merry, merry bells. To these joyous sounds, sung and danced thousands who were merry on that day, if on no other. Clad in their best garments, their tables spread with

lavish hospitality, they dismissed all care, and found utterance for sweet affections in the "merry New Year," and "happy New Year to you" on New Year's day. These were greetings that moved sceptred pride and humble labor to smiles and kind feelings in former times; why should they not be encouraged in our own?

Why not ring every bell five minutes at a time, morning, noon and evening, in New York, Boston, and every other city in the land, and in every village on hill or in valley, where there is a *tongue* to utter forth the joyful sounds? Would not the effect be a good one upon our people, as it was upon our English brethren, or the people in Italy, hundreds of years ago? No doubt of it. English or Italian, Russian or Turk, the same nature impels us all; the same outpourings of spirit in sorrow or in joy.

Dr. Drake tells us, in his "Shakspeare and his Times," that the ushering in of the new year, or new year's tide, with rejoicings, presents and good wishes, was a custom observed during the 16th century, with great regularity and parade, and was as cordially celebrated in the court of the prince as in the cottage of the peasant.

In Rome, the usual presents were figs and dates covered with gold leaf. Among the Saxons of the North, the festival of the new year was observed with more than ordinary jollity and feasting, and by sending new year's gifts to one another. These practices were prohibited by the Emperor Claudius, who died in the year 54, poisoned by his wife Agrippina.

A writer in "The Popish Kingdom," 1553, after remarking on days of the old year, says:—

The next to this is Newe Yeares day
Whereon to every friende,
They costly presents in do bring.
And Newe Yeares giftes do sende,
These giftes the husband gives his wife,
And father eke the childe,
And maister on his men bestowes
The like, with favour milde.

It is the opinion of Dr. Drake that the wardrobe and jewelry of Queen Elizabeth were principally supported by annual contributions on New Year's day. Not only the peers and peeresses gave her money, but the apothecary, master cook and *sergeant of the pastry*, had something to send. One lady gave her majesty a little gold comfit-box and spoon Ambrose Lupo gave her a box of lute strings and a glass of sweet water; each of three other Italians presented her with a pair of sweet gloves. These may have suggested the lines in the "Winter's Tale," where the country girls are invited to buy—

"Lawn, as white as driven snow;
Cypress, black as e'er was crow;
Gloves, as sweet as damask roses;
Masks for faces, and for noses;
Bugle bracelet necklace amber,
Perfume for a lady's chamber;
Golden quoifs, and stomachers,
For my lads to give their dears;
Pins, and poking sticks of steel,
What maids lack from head to heel!"

The word "pins," in the line above, will have force when it is remembered that they had just taken the place of *wooden skewers*, which ladies were obliged to use for want of something better. Gloves were more expensive than in our day, and were esteemed as more valuable than money.

Sometimes the present would be the medium of a lively joke or a grim rebuke. Honest old Latimer, instead of presenting Henry VIII. with a purse of gold, as was customary, for a new year's gift, put into the King's hand a New Testament, with a leaf conspicuously turned down at Hebrews xiii. 4, which, on reference, will be found to have been worthy of all acceptation, though not perhaps well accepted. Henry was an old scamp. One good wife is enough for any man; one at a time, we mean. He had *eight*, each one of whom was probably infinitely better than himself. So it is no wonder that the stern old Latimer called his attention to the passage referred to in Hebrews.

We began this homily with a piece of prose, sparkling with short truths. Let us close it with a few lines from the good Cowper. If they are committed to memory, and repeated occasionally through the year, they will be found comforting and profitable.

"He who holds fast the *Golden Mean*,
And lives contentedly between
The little and the great,
Feels not the wants that pinch the poor,
Nor plagues that haunt the rich man's door,
Embitt'ring all his state.
* * * * * * * * * *
If hindrances obstruct thy way,
Thy magnanimity display,
And let thy strength be seen;
But oh! if fortune fill thy sail
With more than a propitious gale,
Take half thy canvas in."

WORK IN JANUARY.

There are duties to be performed on the farm which are appropriate to each month. They cannot be wisely neglected now, and

must not be postponed to February or June, because they belong to the present.

It is the *reason* with which we are endowed that enables us to look to the future, and to provide the means of securing comfort and sustaining life. The mariner would make a fatal mistake, if he were to put to sea without first supplying the "ship's stores" upon which the crew were to be fed. So the farmer may find many discomforts—some of them ending perhaps in loss of life—by neglecting the duties which properly belong to the month upon which he has entered. The old adage is as true as it is trite, that for the want of a nail the shoe was lost, and for the want of a shoe the horse was lost. This directly applies to many of the domestic concerns of the family. Let it remind us to prepare, this winter,

A YEAR'S STOCK OF WOOD.—Wet wood is the cause of much poor cooking. It prevents food from coming to the table in a palatable and wholesome condition. It increases the labor of the already overburdened wife; disturbs her equanimity, tries her patience and prevents her from performing her domestic duties in a prompt and efficient manner. In the use of green wood, they become a cruel task imposed upon her, and she not only loses health and patience, but loses *credit*, as a good manager and skilful wife.

The use of green wood is an extravagance which farmers cannot well afford. It wastes time to kindle and tend it. It wastes wood, because more is applied than would be necessary, if a single stick were used dry enough to kindle into a blaze at once. It smokes, and puts the eyes out; sputters and snaps like some enraged thing, and makes delicate persons nervous and unhappy.

Green wood contains *one-third* its weight of water, and a large portion of the heat made by it is employed in converting that quantity of water into steam. This carries off a portion of the heat with it and is lost.

One pound of dry wood, burned in a stove fitted for the experiment, will heat 35 pounds of water from ice, 32°, to the boiling point 212°. A pound of green wood will only heat 25 pounds from 32° to 212°. From this we ought to learn how much better dry wood is in the stove than that which is green.

Again, a merciful man is merciful to his beast; will he be less so to *his wife*? He will not, if he lays this woody lesson to heart and acts upon it at once.

He will not neglect the creatures at the barn who are entirely dependent upon him for their daily food.

He will not neglect the best interests of his children, by not engaging with them in their evening readings and question-asking, or by indifference to the lessons they are learning for the next day's recitation at school.

He will not fail to attend the stated meetings of the *farmers' club*, nor to read one or two good works on agriculture during the long evenings.

He will be familiar and cheerful in the midst of the family, encouraging, sustaining, and training all for useful and happy lives.

These are only a few of the duties devolving upon the farmer in January. He will not need suggestions for many of them that will devolve upon him.

THE OYSTER-SHELL BARK LOUSE.

While engaged, since the leaves have fallen, in removing new shoots and pruning off occasional limbs that were crossing each other, in an orchard that has always been kept in good shape, we have been surprised in noticing the countless number of the habitations of this insect. We suppose it is called the *oyster-shell* bark louse, because the shell which covers the eggs is similar in shape to an oyster shell, and also, because it gives a roughness, somewhat like that of its namesake, to the bark upon which the scales are placed.

As a general rule, insects first attack vegetables and animals that are not in a thrifty condition. This is the case with the apple trees. Trees standing near walls, where the surface under them was swarded over, were literally covered with these scales. The bark had a hard, dry, and shrivelled appearance, and the whole tree looked diseased, although the roots had plenty of room to run out into a rich soil. But these pests were not confined to such trees alone; they were on trees that have always stood in rich, cultivated ground, and that made a growth of more than eighteen inches the present year, in some of the leading branches, and an average growth all over the tree of perhaps five or six inches. That is enough for an apple tree to do in one year, so far as growth is concerned.

On a part of a branch now lying before us, half an inch in diameter, and one inch long, we count *fifty-six* scales. Examining them to-day, under a microscope of high power, we could not see the eggs with sufficient distinctness to count them. They are probably not yet enough developed. Last May it was easy to count the eggs. Some accounts state that under each scale there are many eggs. Allowing only six to each scale, would give 336 eggs to the inch, or 10,080 to the whole twig lying before us, which is 30 inches long. Or, if containing 35 eggs each—as indicated by Harris—the single twig has 58,800 eggs upon it.

If an orchard of one hundred trees should be infected as this branch is, the number of eggs would be absolutely inconceivable by any power which the human mind possesses. As well might it attempt to conceive of the distance of the planet Uranus from us, whose light, though travelling at the rate of 192,000 miles per second, is, nevertheless, more than eighty years in reaching our earth!

In considering these things, the questions come to the mind, What influences have this vast family upon the apple trees?

Do they poison the bark upon which the eggs are placed, and retard, or destroy, its proper action?

Do they exhaust the moisture in the bark, and cause the dry and shrivelled appearance which it presents?

Do the insects, when hatched, march forth in countless legions, and feed upon the newly-formed wood, or by their presence act in any way to prevent the trees from fruiting? Who can tell? Who is wise enough for these things? Have we any power over these predatory hordes, or must we sit idly by and let them run, unmolested, over plants which have cost much care and labor?

Dr. Harris suggests the application of a wash made of two parts of soft soap and eight of water, with which is to be mixed lime enough to bring it to the consistence of thick whitewash. This is to be put upon the trunks and limbs of the trees with a brush, and as high as practicable, so as to cover the whole surface, and fill all the cracks in the bark. This must be done in the early part of June, when the insects are young and tender!

But—bless the memory of Dr. Harris—who is able to do these things! Consider the little twig before us,—only thirty inches long, and containing 58,800 eggs, and from 50 to 200 such twigs on a good sized tree! And the enemy is *on* the twigs, where the wash must come, or be ineffectual. When any of our brother farmers possess as many dollars as there are pebbles in a gravel pit, we hope they will commence the work, and allow us to witness the operation.

But we are not altogether powerless yet. Read the following article, furnished to the *Western Rural*, by Mr. J. W. ROBSON, who suggests a remedy so cheap and so easily applied, that all may avail themselves of its advantages. The "*white*-fish barrel" of which he speaks, was probably a barrel in which the celebrated "White-fish" of the lakes had been salted. He says:—

This insect has engaged much of our thought, and received much attention from us during the last fifteen years. Remedies composed of alkalies and oils have been tried with varied success. Our first attempts in fighting the enemy was with the brush, using liquid applications of various descriptions, solutions of sal-soda, potash, soft soap, whale oil, lard, tobacco, lime, &c., all of which will destroy the insect, but the mode of applying the mixtures always proved wearisome, and, likewise, consumed too much valuable time.

Late in the fall of 1867, the idea impressed us that if some cheaper remedy in a liquid form could be discovered, and that at the same time, some means of applying it quickly to infected trees could be obtained, farmers and fruit-growers generally would be induced to make an effort to eradicate the foe which was sucking the life giving sap out of their apple-trees, and restore their orchards to their pristine vigor and fruitfulness.

Being very anxious to deliver ourselves from a troublesome pest, and in our humble way to benefit our generation, we set to work accordingly to carry out our ideas. We procured a large tin syringe, which our tinsmith made to order. It was a very primitive affair, but it answered the purpose admirably, costing only fifty cents. We commenced operations about the beginning of December, when the leaves had fallen from the trees, mixing up all kinds of decoctions and applying them faithfully. Some were successful in the work of destruction, but too costly for general application. The cheaper mixtures failed of success. One day while cleaning a *white-fish barrel* we thought we would try fish brine. Having a young apple tree close at hand, completely covered with lice, we began experimenting, taking a common wooden pail, and filling it with boiling water, dissolving therein one pint of brine. When sufficiently cool to handle, we syringed the infected tree, thoroughly drenching every branch and twig.

Early next spring, on close examination, we found every insect dead and the scales dry and shriveled up; placed under the lens of a powerful microscope, they presented the appearance of half burned chips of wood. Other applications since then have proved quite successful.

Those who have made this insect a study know that the young lice are hatched about the latter end of May, or first week in June, being earlier or later according to the season. Immediately on issuing from under the scale they commence their

upward march towards the ends of the shoots, never making a retrograde movement unless in case of storms, when they face right about and seek the cover of the old scales. Their ability to move continues only for a few days, when they lose their legs and tails, assume the scale like form, and become a fixture on the shoot.

During the last week of May, 1868, the young brood began to move, and in greater numbers than in previous years, so numerous that the shoots appeared to the naked eye as if sprinkled with fine particles of corn meal. Anxious to try the fish brine cure, we syringed a large tree with two pails full; it took two minutes by the watch. Result—every louse was killed, and so was every leaf and every green shoot and apple on the tree.

The second mixture tried was half a pint of common salt to a pail of water. Result—the insect lived, but leaves and shoots were destroyed.

The third and last mixture was a quarter of a pound of whale oil soap, dissolved in the same quantity of water. Time expended in syringing, two minutes. Result—death to the insect, health and vigor to the tree, and a handsome and abundant crop of apples.

Before closing, we will mention a fact which we noticed last year, which perhaps will be interesting to entomologists, and certainly of value to fruit-growers. While looking at the movements of the young lice through a powerful magnifying glass, we discovered a round shaped, black lady bug, with four distinct white spots on the back, feeding upon the young lice, completely cleaning the shoot as it went along. Farmers, spare every one of them, for they are our best friends.

DEATH OF B. D. WALSH, ESQ.

The Western papers announce the death of this gentleman at his residence in Rock Island, Ill., November 18, aged 62 years. At the time of his death he was senior editor of the *American Entomologist*, and held the position of State Entomologist of Illinois. He was born in England, and was a graduate of Oxford. He emigrated to this country in early life and settled on a farm in Illinois, and was subsequently engaged in the lumber business. From his boyhood his favorite study has been natural history, especially that branch of it known as entomology, and by his writings upon this subject his name has become familiar to the readers of the agricultural papers of the country, and especially to those of the *American Entomologist*. He possessed the rare faculty of writing on the subject of insects in a manner to interest both the scientific and the unlearned reader. His story of a bug had all the interest of a romance, and all the precision of a jaw-breaking technologist. For several years past he has devoted himself almost exclusively to his favorite science, and at the time of his death had the most extensive private collection of specimens in entomology in the country. His death was occasioned by injuries received from an engine while walking on a railroad track. The *Prairie Farmer* says, "of his family in England, we only know of one member, a brother, the present editor of the *London Field*, and the well-known author of the best work on the horse, in the language, written under the *nom de plume* of 'Stonehenge.'

CHOKED ANIMALS.

Every autumn animals are choked by turnips, potatoes and apples. They are often relieved by thrusting a fork handle, a broomstick or whip stock down the gullet. This operation is not without danger, and it sometimes fails. A case occurred in our neighborhood, a few days ago, in which the stick was pushed through the side of the gullet of a fine heifer, and the operator supposed the obstruction was removed; but the animal died in two hours. On opening her, the fact was revealed that there were two holes made in the gullet, while the turnip remained impacted in the passage.

The following simple apparatus should be kept on hand by every farmer, and will generally be found effectual. Take a piece of smooth wood, about ten or twelve inches long, and nearly as large round as a man's wrist, to hold open the animal's jaws. Bore a hole near each end, large enough to receive a strong cord. Then bore a hole in the middle large enough to receive a common broom handle. Put into one of the end holes a cord a yard or more in length, tying it with a firm knot, and the gag is complete. Get a smooth broom handle or other wooden rod, and after fastening very firmly upon the end a small ball or covering of cloth, as represented by the cut at *a*, but not so large as not to slip readily through the middle hole in the gag, and lay them up together, where they can be readily found. To prevent their being separated, it may be well to tie them together, when put away.

When an animal is choked, take the gag and put it into the mouth above the tongue, and bring the cord over the head behind the horns, and tie it firmly into the hole at the other end, and you have a perfect gag which the animal cannot shake out of her mouth. Then pass the broom stick through the middle hole, and push it gently into the gullet until the obstruction is reached, then tap it gently and repeatedly until the obstruction gives way. Never use violence in any case. This apparatus in careful hands will seldom fail. It may be prepared by almost any one, is easily used, and should always be kept ready.

Sales of Improved Stock.—James S. Monroe, Lexington, Mass., has sold a half Dutch cow that gave on Thanksgiving Day,—nine weeks after dropping her calf,—twenty quarts of milk on a common feed of hay and one pint of oil meal.

Winthrop W. Chenery, Highland Stock Farm, Belmont, Mass., has recently sold to S. B. Emerson, Mountain View, Santa Clara County, California, one Lincoln ram, four rams and sixteen ewes of the Texel or Mouton Flandrin breed of sheep; two bulls and one heifer of the Dutch or Holstein cattle. These animals went overland by rail, and

are probably the first consignment of improved stock that crossed the Rocky Mountains by the Pacific Railroad.

ROCKINGHAM, N. H.—The report of the Treasurer of the Agricultural Society of this county made at the annual meeting at Exeter, Nov. 13, as we learn from the *Mirror and Farmer*, shows the receipts to have been $2,114, expenditures $1,846, cash on hand $268. The net profit of the late fair was $111; the first fair for years that did not involve a loss. The next fair is to be held Sept. 13-15, 1870, but the place not decided upon.

The officers elected for the year are as follows:—

President—Darius Towle, Kingston.
Vice Presidents.—Benjamin F. Haley, Newmarket; W. Norris Dow, Epping; George W. Sanborn, East Kingston; James R. Leavitt, North Hampton.
Secretary—Andrew J. Hoyt, Exeter.
Treasurer—Jacob Carlisle, Exeter.
Directors—Charles E. Smith, South Newmarket; John S. Bennett, Newmarket; J. Frank Lawrence, Epping; Henry P. Wingate, Stratham; Ezra Currier, Fremont; Gideon Webster, Kingston; Harrison Rowe, Kensington.

For the New England Farmer.

THE GARDEN FOR JANUARY.

Again we are permitted to stand on the threshold of another year, and to present the "compliments of the season" to all the readers of the FARMER'S Garden Calendar. That the year now commencing may be to each and all a "Happy New Year," and a prosperous one in all that pertains to the culture of the garden and the farm, is the earnest wish of the writer. May it be happy and prosperous to him who cultivates only the least spot of a garden for a few vegetables, as well as to him whose garden and farm embraces many broad acres.

To the end that the greatest profit and satisfaction may result from our labors, we must plan in advance, and work from system. Order, neatness and economy are virtues that are not to be overlooked in the smallest of things; and will greatly enhance the profit and satisfaction resulting from our labor. Let each one, then, with pencil and paper in hand, set down, this new year's eve, and note down the work for January, and in the order it should be done, taking into calculation the probable interruptions, delays, &c.

In our northern climate, the season is such as to preclude much active out-door operations in the garden, and the present is the farmer's and gardener's resting season; yet with a judicious plan of operations, there is always something to do. The garden will need visiting occasionally to see that everything is right. If mice are girdling trees, shrubs or vines, snow should be piled around injured places and be heavily tramped, to remain till other remedies can be applied; if water stands in any places occupied by crops, &c., it should be drained away by opening surface drains. See that fences and gates are all in order and kept close. A hungry stray animal will spoil a tree or shrub that has cost you time and money, and which perhaps you would not lose for the value of the animal.

BEAN-POLES, STAKES, PEA BRUSH, &C.—Now, while there is leisure and you are hauling timber, &c., from the woods, is the time to lay in a supply. If you wait till later, other work will begin to press and a much poorer stock may be selected, if indeed you have time to get any at all. Cut bean poles eight feet long, trim them smoothly and sharpen them neatly. A straight limb, or young tree, of close growth, 1½ to 2 inches in diameter, if of strong wood, is as good as any. If one has the wherewith and desires to make them more durable, they can set the lower ends of the stakes, &c., in a kettle of tar and boil them, taking them out and rolling them in fine dust, and repeating the boiling. Set them away carefully to await their season of use. White birch makes the best pea brush. Cut and pile them up. A heavy weight placed on the pile gives the brush a better shape for use.

COLD FRAMES.—These will need coverings of straw, mats, boards, shutters or other protection during severe weather. When the weather is mild and pleasant the plants should be ventilated, admitting light and air, in the middle of the day. Care must be used not to keep open too late in the day, or to give too strong light after having been kept dark some days.

CUTTINGS OF CURRANTS, GOOSEBERRIES, GRAPES, &c.—If these have not been previously made and are desirable, a supply may be taken at any time, when not frozen. Bury them in fresh damp soil, brought in for the purpose, in the bottom of the cellar. The reason why I say "fresh soil," is, that many scions buried in the dirt of old cellar bottoms are lost, from the saltpetre or other poison often found in such dirt. The soil to bury them in should be only moist enough to keep them fresh, without soaking the bark or buds.

HOT-BED FRAMES AND SASHES.—New ones should now be made or purchased, and old ones repaired. No garden can be complete without one or more hot beds; they are cheaply constructed and easily managed by any one of ordinary good judgment. With a hot-bed a variety of garden vegetables may be easily obtained some weeks earlier than in any other available way.

SEEDS.—Did you save a supply of your own growing? If so, look them over and see that they are all safe and sound and in every respect perfect of their kind. Is there any variety you desire that you have not heretofore grown? Send for the seedman's catalogue as soon as out, examine and order early, while there is a full stock to select from.

W. H. WHITE.

South Windsor, Conn., 1870.

AGRICULTURAL ITEMS.

—In 1860 the live stock of Connecticut was valued at $11,311,079; in 1868, at $13,012,699, and in 1869, at $24,687,141.

—One of the Sandwich Islands claims to have the largest orchard in the world, some of the trees bearing fifty barrels of apples.

—The Champaigne County, Ill., correspondent of the *Country Gentleman* says that nine-tenths of the "drive wells" put down in that section for the purpose of watering stock, have proved failures.

—Tennessee is wool-growing. One thousand sheep passed through Nashville for Warren county the other day, and were quickly followed by three thousand more.

—The New York Farmers' Club says that a cellar that cannot be drained may be made as tight as a jug by covering the sides and bottom with cement, and then adding a coat of the plastic slate.

—Dr. Randall, Cortland Village, N. Y., is preparing and will soon have ready, blank petitions to Congress for the signatures of wool growers, which may be had by addressing him as above.

—Col. Alexander writes to a Glasgow paper that the Paris police are furnished with lactometers, by which milk is tested as it is brought into town. If found watered, it is thrown upon the road and imprisonment follows.

—There is a colony of Japanese in California, who, it is said, will give their attention to the culture of the tea plant and of silk. They think that the soil and climate are well adapted to the tea plant.

—The Deerfield, N. H., Farmers' Club met Nov. 12, and reorganized, The officers for the year ensuing are:—President, E. P. Chase; Secretary and Treasurer, H. O. Walker; Directors, J. Chapman, J. Dearborn, and J. K. Gerrish.

—A correspondent of the New York Farmers' Club having asked how to clean cucumber and tomato seed, was told to spread on a piece of paper in the sun to dry. They will be clean enough for home use; for commercial purposes, it is necessary to wash out the pulp and dry them.

—Fred Boetner and his wife, of Otisco, Mich., raised and harvested seventy-five acres of grain the past season. From these acres they obtained 1252 bushels of wheat, 1,035 bushels of oats, and 64 bushels of barley. He and his wife did all the labor except a portion of the threshing.

—Prof. Johnson says, in the *Western Rural*, that marls, like the purer limes, act more energetically if aided by the occasional addition of other manures; and like them they finally exhaust a soil from which successive crops are reaped without the requisite return of decaying animal or vegetable matters.

—Mr. Rodolphus Thompson, of Jay, Me., has manufactured 7000 pounds of cheese and 500 pounds of butter from the milk of thirty-two cows the past summer. He sold over 6000 pounds of cheese at 18 cents a pound, and considered it more profitable than butter at 50 cents.

—Rev. Mr. Dunham, Bryant's Pond, Me., raised this season from a single pea the following remarkable crops: Twenty-five were grown at the first crop, and two thousand nine hundred and forty at the second; making in the whole, by actual count and measurement, 2965 peas, or three pints!

—A correspondent of the *Country Gentleman*, who has recently travelled through northwestern Ohio, northeastern Indiana and southern Michigan, says, be the cause what it may,—wet summer, luxuriant vegetation, insufficient drainage, or all combined,—certain it is that the ague and kindred diseases, have prevailed to an extent unheard of in these late years, and have demoralized farming this fall more than did the short crop or the heavy freshets of the spring time. The many shivering forms, despondent hearts, pinched-up faces, and do-less hands, account for the general backward state of farm-work in the sections visited.

—The quantity of milk drawn from a cow per annum, depends more than some imagine upon the milker. The best cow in the world may soon be spoiled by careless and irregular milking, whereas an ordinary animal may be made to yield much more of the delicious beverage than usual, by the right performance of this simple operation. To find a good cow is not an easy thing—but more easy than to find an accomplished milker.

—A correspondent of an Eastern paper suggests the following plan, to prevent the sagging of gate posts: "Set the hanging post three and a half feet in the ground, tramp well at the bottom, on the side opposite the gate; then dig a trench six inches deep from one post to the other; in this put a three-by-four scantling, or a pole of white oak, black mulberry, or some other lasting timber, seeing that it just fills the space between the two gate posts and cover with earth, and the gate will stand as you hang it until the posts rot off."

To Manage a Rearing Horse.—Whenever you perceive a horse's inclination to rear, separate your reins and prepare for him. The instant he is about to rise slacken one hand and bend or twist his head with the other, keeping your hands low. This bending compels him to move a hind leg, and of necessity brings his fore feet down. Instantly twist him completely round two or three times, which will confuse him very much, and completely throw him off his guard. The moment you have finished twisting him round, place his head in the direction you wish to proceed, apply the spurs and he will not fail to go forward.

DESIGN FOR A COUNTRY, OR VILLAGE HOUSE.

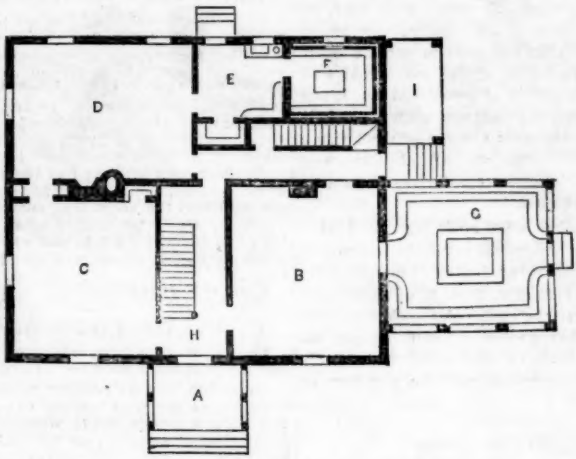
This design and plan, by Mr. Geo. E. Harney, was drawn and engraved for the NEW ENGLAND FARMER, and is intended more expressly for a small milk farm near a city or large town, where the cultivation of flowers and plants might also be made a profitable business. But aside from these peculiarities, the arrangement of the rooms are suggestive of comfort and convenience. The conservatory might be omitted entirely, and the milk room used as a store-room, or for other purposes.

As indicated by the plan, A shows the portico; H the front hall, 7 by 16 feet; B the parlor 14 by 16 feet, and opening out of this is the conservatory, G, for plants and flowers, 14 by 18 feet, fitted up with shelves at the sides, with a stand in the centre and a passage way of three feet in width all around it. From personal observation, Mr. Harney recommends the following plan as the most effective way of heating a small green house: A furnace made of a common air-tight stove is placed in a brick air-chamber underneath the floor, the heat passing up through a single pipe running from the *top* of the chamber to the floor—while from the floor at the farther end of the conservatory, near the door, another pipe extends downwards, and terminates in the *bottom* of the air-chamber, thus producing a thorough circulation of air all the time, with a regulated supply of fresh air from out of doors conducted by means of a box like a common furnace box, to the chamber. The six upper sashes of the roof have pulleys and cords by which they may be lowered or raised at pleasure.

At the further extremity of the front hall a glazed door opens into the back entry. This hall opens out upon a back porch, I, 6 feet wide, and into the parlor and kitchen, D, which is 12 by 18 feet. The dining room C, 14 feet square, also connects with the kitchen by means of a small passage fitted up with shelves. On the right of the chimney is a good-sized china closet. Opening out of the

kitchen is a pantry, E, 6 by 8 feet, with sink, pump, cupboard, &c. This pantry opens out upon a platform at the rear of the house.

The plan of the milk room, F, was invented by H. Wing, of Morris, N. Y., and applied to his own house. A window on the north admits cold air. The room is over a cold cellar, from which air is admitted by slatted openings running nearly the entire length of the room under the shelves, and of about the same width, closed by a board with hinges like a trap door. Near the ceiling, and opening outward and upwards on the north side of the house, is a similar trap door, three or four feet long, and about a foot wide, with an elevating stick with notches, by which it may be raised as desired. When the upper ventilator is opened, the heated air passes out, and cold air from the cellar rushes in to fill its place. A ventilated space of about seven inches surrounds the room, and prevents the heating so often resulting from confined air in the adjacent walls. The shelves are not flat boards, but are formed of strips, to get a free circulation of air on every side.



The second floor of the house contains two front chambers, each fourteen feet square; a kitchen chamber, twelve by fourteen; another chamber over the pantry and entry, nine feet square; and a small room over the dairy.

As these plans are designed to be suggestive,—to afford hints rather than to furnish models or working plans,—we do not deem it necessary to enter into the particulars of finish, height of rooms, cost, &c., as all of these can be varied to suit individual taste, convenience and circumstances.

EXTRACTS AND REPLIES.

VALUE OF OYSTER SHELL BEDS LEFT BY INDIANS.

I saw it stated in the last MONTHLY FARMER that oyster shells were of no account to the farmer. To me it does not seem as if that was so. In the past twelve years I have carted more than one thousand loads of oyster shells, from an old deposit left by the Indians. I have always raised good crops; better than could have been expected from my land without them. The shells have been put into a barn cellar and mixed with other manure. I have never tried them alone. But this is a fact, that wherever we find shells, the grass grows much better and keeps green through the season, and this year I have raised good corn, without any dressing, in almost a solid heap of shells. Now on the Cape there are numerous deposits of shells, and I think it will pay to cart them. I think the Indians roasted the oysters, as the shells have that appearance, and crumble at the touch. A few bones, ashes and coals are found with them, and if the shells are a foot under ground the soil will be as black as any Western land. I would like to see what some others think about it. SUBSCRIBER.

Osterville, Mass., Oct. 18, 1869.

REMARKS.—As the article alluded to by our correspondent was written by Dr. Jas. R. Nichols, of this city, the above communication was submitted to him, and he has furnished the following reply:—

"As regards the remarks of your correspondent at Osterville, it may be said, that there are but one or two points worthy of comment or reply. He says he has carted thousands of loads of oyster shells upon his land, and has raised 'good crops.' He has 'never used oyster shells alone,' but al-

ways mixes them with the manure in his barn cellar. This proves, not that oyster shells are fertilizing agents, but that mixed with manure, the manure is not *injured essentially* by *their presence.* It should be said, once for all, that oyster shells are composed of carbonate of lime; and carbonate of lime is *not a manurial agent.* It is hard, insoluble marble, and of no value in agriculture. The Indians left upon the coast in certain localities, great heaps of these shells, and mixed with them is found charcoal or carbonized wood, and some leaves and other organic matter, partially decomposed, which gives to some of the heaps a dark hue. These heaps, and all other heaps of clam and oyster shells, are valueless to farmers and should be let alone."

May not the bones, ashes, coals, leaves and other organic matter which would naturally find its way from the wigwams of the Indians, who fed on the oysters from these large deposits of shells, and which give them the dark color spoken of, add sufficient value to the mass to justify its use, although the carbonate of lime of which the shells were originally composed may be valueless in agriculture?

IRRIGATION OR FLOWAGE.

I do not propose to speak in this article of that branch of irrigation by which water is conducted along the brows of hills by means of ditches, but I desire to call attention to the winter flowage of natural meadows or swamp lands, through which a stream of water flows. Often only a short dam is needed near the outlet, to effect the purpose, with a bulk-head by which the water can be let on or off and its depth regulated. Land thus flowed would not only be enriched by an annual deposit of fertilizing matter, but the roots of grass would be protected from injury by frost.

Millions of tons of hay might be added every year to the crops of the New England States by this method. Almost every farm of any extent, contains many acres of unsightly swamp, now considered worthless by many, but in reality by far the most valuable of all its acres, which if cleared and flowed would not require artificial or barn-yard manures to produce annual crops, as is the case with high land fields, from many of which much of the manure is yearly washed into the streams and lost.

Nature in all cases provides the means of restoration to her own exhausted energies, if short-sighted mortals would not pervert her course. When the upland pastures and fields become almost worthless by a suicidal mode of skinning, kind Nature would spread a growth of forest trees over the exhausted landscape, restoring potash to the soil, and bringing it back to its primeval state of fertility in a few years.

The low lands she would restore by the element of water as well as by fallen leaves. Snow water, according to the best authorities, contains ammonia, and perhaps other enriching qualities. These principles were well understood by the nations of antiquity. The flat fields of old classic Egypt were fertilized by the annual overflow of Father Nile, while her once productive lands, lying above the reach of the enriching waters, became barren sands which are not only unproductive, but are gradually drifting around and covering up the stupendous ruins which still attest the former prosperity and greatness of that country. Ancient Rome, too, has remains of vast works which show that the value of water was well understood by the farmers of old. Virgil, in Georgic 1st, says:

"Lo! on yon brow, whence bubbling springs arise,
The peasant, bending o'er the expanse below,
Directs the channeled waters where to flow.
Down the smooth rocks melodious murmurs glide,
And a new verdure gleams beneath the tide."

The following circumstance, quoted by Warton, from Montesquieu's Spirit of Laws, is to the point:

"When the Persians were masters of Asia, they permitted those who conveyed a spring to any place which had not been watered before, to enjoy the benefit thereof for five generations; and as a number of rivulets flowed from Mt. Taurus, they spared no expense in directing the course of their streams. At this day without knowing how they came there, they are found in the fields and gardens." Isaiah testifies to the same sentiment—"as the rain and the snow that cometh down from heaven returneth not thither again, but watereth the earth and causeth it to bud and blossom, and bring forth seed to the sower and bread to the reaper."

M. J. HARVEY.

Epping, N. H., 1869.

A NEW OUTLET TO THE MISSISSIPPI VALLEY.

The following paragraph is going the rounds of the papers in this section:—

"A project is to be brought to the attention of Congress at the next session, to make for commerce a new mouth of the Mississippi river, by a canal of great capacity, on the line of the unfinished James River and Kanawha canal, across the mountains of Virginia. The proposed work would be 400 miles long, and would make a continuous water communication from the sea westward to the 17,000 miles of navigation in the Mississippi valley. It is claimed that such a work would increase the value of Western produce a hundred millions a year, while cheapening bread in the East; because, as estimated, Western grain would save fully two-thirds of the freight now paid by the consumer and producer to the carrier."

In my opinion there is no projected improvement in the whole country that will compare with this in importance both to producer and consumer, and I wonder that it should have been so long overlooked. Once in operation, its whole cost would be saved, many times over, every year to the people. It would not only cheapen bread at the East, and give the producer at the West a better price, but it would open a market for an almost inexhaustable supply of coal and timber, which exists along its route, which could be furnished at much cheaper rates than from any other source. New England capital and skill would here find a most inviting field. Already several factories are at work, or in process of construction, for manufacturing furniture, &c., &c., from the fine material furnished by the forests of Western Virginia, or rather for prep.ring all the parts ready for transportation, to be put together at other points. The superiority of our soil, the excellence of our climate, and the cheapness of our materials for manufacturing, are already admitted, and the fact that we are comparatively near market, will soon become manifest.

J. H. R.

West Virginia, Oct. 25, 1869.

COARSE AND FINE WOOLED SHEEP.

I have read with interest all the communications on this subject in your valuable paper for the last year. In breeding sheep, I have sought as much weight of sheep as amount of wool. My sheep are Merinos. They average about 100 pounds, and sheared a little over six pounds washed wool this spring. When wool brought $1 a pound, my lambs

weighed seventy-seven pounds each, and brought $7.70 per head. Last year my lambs were a little more fashionable and smaller. I sold them for $2 50, for mutton, after selecting ten of the best. Then I went to Connecticut and bought of Burdett Loomis a yearling Cotswold buck and raised from sixty ewes, sixty-seven lambs, and I never had less trouble or better success. I saved nineteen bucks, only two of them weighing less than one hundred pounds, and some of them weighing one hundred and twenty-three, at seven months old. There is a pair of twin ewe lambs in town from my buck that weighed, at six months old, 105 and 110 each. I have sold seven of the bucks for $98, the other twelve, if not sold for stock, are good for 140 or 150 pounds before spring, and will bring fancy prices for mutton. This added to the six pounds of wool will give more profit than a large amount of grease from a forty pound sheep or a small fleeced South Down. M. DUSTIN.

West Claremont, N. H., Nov., 1869.

LAME CHICKENS.

My chickens as soon as grown lose the use of their limbs. They try to walk, and fall over, try to fly and cannot. They have no use of their legs, —sometimes one, at others both,—grow poor, and have to be killed. I have examined them and can find no cause. Some of my neighbors are troubled the same. If you know a remedy, please answer; if not, please ask if any one does. SUBSCRIBER.

Haverhill, Mass., Nov. 3, 1869.

DECOMPOSING BONES.

I have a quantity of old bones. Are they of any value? If so, what is the best way to decompose them? A SUBSCRIBER.

Lovell, Me., Oct., 1869.

REMARKS.—In the article on the Garden in November, in another column of this paper, you will find an answer to your inquiry. Some care will be necessary to success, but bones *can* be softened in this way.

BUCKHORN.

In answer to the inquiry of your correspondent "Essecker," who writes from Danvers, I would suggest that the plant he calls *buckhorn* may be the *osmunda regalis*, a fern, quite common in swampy lands. I remember that this was called buckhorn in my native town (Weymouth) when I was a little boy. I do not know whether it is poisonous for *horses* or not; but I do know that cattle eat it with a good relish, in large quantity, without any apparent ill effect. My father used to say that it was as good as English hay for cows.

Concord, Mass., Oct. 24, 1869. M. P.

CHEESE.—Gardner B. Weeks, Syracuse, N. Y., Secretary of the American Dairymen's Association, has issued a circular announcing that the Association offers a premium of one hundred dollars for the best original essay on "The Claims of Cheese as a Wholesome, Nutritious and Economical article of Food." The premium will be awarded and the money paid at the Annual Convention of the Association at Utica, N. Y., January 12 and 13, 1870. The essays must be forwarded to the Secretary, Syracuse, N. Y., as early as December 20, 1869. The premium will be awarded by a competent and disinterested committee of three gentlemen. It is designed to make use of the premium essay in the next annual report of the Association.

VERMONT DAIRYMEN'S ASSOCIATION.

We learn by the *State Journal* that an association of the dairymen of Vermont was formed at a meeting of farmers at Montpelier, Vt., October 27. Hon. R. J. Saxe of Sheldon, was Chairman, and O. S. Bliss, of Georgia, Secretary. The following constitution, reported by a committee, consisting of O. S. Bliss, of Georgia, E. D. Mason, of Richmond, and G. C. Chandler, of Montpelier, was adopted:—

Constitution.

SECTION 1. This organization shall be called the "Vermont Dairymen's Association."

SEC. 2. Its object shall be to improve the Dairy interests of Vermont, and all subsidiary interests.

SEC. 3. This Association shall consist of such persons as shall signify their desire to become members and pay the sum of two dollars, and a like sum annually thereafter, and of honorary and corresponding members.

SEC. 4. The payment of five dollars shall constitute a Life Member.

SEC. 5. The officers of the Association shall be a President, three Vice Presidents, (one from each Congressional District), and a Secreiary, who shall constitute the Executive Committee, and have the general oversight of all the affairs of the Association; also a Treasurer and fourteen Trustees, who shall be charged with the interests of the Association in their respective counties, and constitute a medium of communication between the Executive Committee and the resident members of the Association. They shall also act as a Board of Appeals on all questions of difference that may arise between the Executive Committee and any member.

SEC. 6. The Annual Meeting for the election of officers and the transaction of business shall be held on the second Wednesday after the second Thursday in October in each year, at such place as the Executive Committee shall appoint. There shall also be held during each winter, at such time and place as the Executive Committee may designate, a meeting for addresses and discussions, to continue at least three days, which meeting shall be open to all members of the Association.

SEC. 7. It shall be the duty of the Secretary to prepare an Annual report of the transactions of the Association for the current year, embracing such papers, original or selected, as may be approved by the Executive Committee, and cause the same to be published and distributed to the members of the Association.

SEC. 8. The Treasurer shall keep the funds of the Association and disburse them on the order of the President or a Vice President, countersigned by the Secretary, and make a report of the receipts and expenditures to the Annual Meeting in October.

SEC. 9 This Constitution may be amended at any Annual Meeting by a two-thirds vote of all the members present.

Mr. Mason, of Richmond, was called upon for a statement relative to the Dairymen's Association in New York, who gave a favorable report of its operations, showing that the

superior quantity and quality of the cheese produced, resulted in a great degree, from the operations of this organization. Mr. Mason believed that Vermonters, with equally good pasturage and a better climate, could place their cheese at the head of the list, with the same skill in manufacturing. He believed an organization or association among farmers would help to accomplish such a result in Vermont.

A committee consisting of Mr. Mason, of Richmond, Mr. Hall of Burke, and Mr. Bliss, of Georgia, was appointed to report at an adjourned meeting, officers for this organization, also to solicit members for the same.

At an adjourned meeting, Oct. 28th, this committee submitted the following report, which was accepted and adopted.:—

President—E. D. Mason, Richmond.
Vice Presidents—Middleton Goldsmith, Rutland; N. B. Safford, Hartford; R. J. Saxe, Sheldon.
Secretary.—O. S. Bliss, Georgia.
Treasurer.—G. C. Chandler, Montpelier.

County Trustees.

Addison—D. W. Nash, New Haven.
Bennington.—A. B. Armstrong, Dorset.
Caledonia.—H. M. H. Hall, East Burke.
Chittenden.—E. Barnum, Milton.
Essex.—E. S. Freeman, Guildhall.
Franklin.—A. A. Moore.
Grand Isle.—Allen R. Manning, Alburgh.
Lamoille.—E. P. Mudgett, Cambridge.
Orleans.—Ezra F. Darling, Derby.
Orange.—Aaron N. King, Tunbridge.
Rutland—A. D. Smith, Danby.
Washington.—G. C. Chandler, Montpelier.
Windsor.—C. Horace Hubbard, Springfield.
Windham.—Peleg Winslow, Putney.

POISON CHEESE.

Mr. X. A. Willard gives in the *Rural New Yorker* the particulars of a case where several persons were poisoned by a lot of cheese made in St. Lawrence County, N. Y. No lives were lost from eating this cheese, but several persons were made sick, with pains and cramps and excessive vomiting. Dr. Jackson, who analyzed portions of this cheese, could find no metal or mineral poisons, nor any alkaloids or deleterious vegetable principles. But he did find "a small proportion of offensive putrifying animal matter," which does not belong to good cheese. He said he could not give this matter any correct name, but suggested that it might come from the rennet. Mr. Willard says:—

The facts elicited from this analysis of Dr. Jackson correspond in some respects with those discovered, a few years since, by Dr. Voelcker, and from which it would appear that cheese, as well as other kinds of animal food, under certain conditions of decay, generates a peculiar organic poison; but what the composition of this virulent poison is, the chemists are as yet unable to determine. Dr. Voelcker stated to us in a conversation on the subject in 1866, that instances had come under his observation where this poison in cheese had become dissipated as the cheese passed into a further state of fermentation and decomposition, and that the cheese could then be safely eaten, producing no injurious or unpleasant effects.

Mr. Willard then gives a detailed statement of an analysis made by Dr. Voelcker of some cheese in England that was known to be poisonous. In the first place his object was to detect mineral poisons, but not a trace of them was to be found in the cheese he was analyzing, although on former occasions he had found sulphate of zinc, sulphate of copper, in cheese that had proved poisonous. The Professor then says:—

"The proportion of water in this cheese was rather large, considering that it must have been cut for some time, and have lost water by evaporation. On further examining it I found it remarkably sour, and had no difficulty in detecting an unusually large quantity of fatty acids, which, if not poisonous themselves, are the vehicle conveying the peculiar organic poison which appears to be generated sometimes in cheese undergoing a peculiar kind of fermentation. Probably the poison generated in this modified decay of cheese is identical with the so-called sausage poison, which is sometimes found in German sausages, especially those made of coagulated blood. A similar poison appears to be generated sometimes in pickled salmon, smoked sprats, pork, tainted veal, bacon, and hams. Bacon and hams, when not perfectly cured, and fat meat kept in a damp, badly ventilated cellar, are very apt to become more or less injurious to health; and even butter, after it has turned rancid, and similar organic acids are liberated in it which exist in this cheese in a free state, acts as a poison in most cases. Singularly enough, some people are not affected by these subtle organic poisons.

Dr. Voelcker regrets that we have no ready means of detecting this insiduous poison which, in a great many cases, has produced fatal results. He also says, that it appears that *cheese kept in damp, badly ventilated places*, or where too much whey is left, or, indeed, all the circumstances which tend to produce a too acid curd and to generate free fatty acids, are apt to produce this peculiar poison. The cheese maker will see, therefore, how important it is to have a properly ventilated curing room for his cheeses, and also that the whey be thoroughly expelled from the cheese.

—President Abbott, of the Michigan Agricultural College, said in his remarks at the meeting of farmers at Bangor, Me., that at the State Agricultural College of Wisconsin—connected with a literary university—with about 400 students, the most diligent inquiry could not find one that had determined to return to industrial pursuits.

UNRELIABLE SEED CORN.

In this climate, with our small-sized yellow corn, we seldom have any trouble with seed corn where ordinary care is used. But with sweet corn, especially of the large varieties, there is much complaint. One of our neighbors planted a peck last spring, and he thinks that not more than forty kernels germinated. Another estimates that not more than half that he planted came up. We never fail to have our sweet corn germinate as surely as the yellow corn; but a little care and pains are necessary to secure this result. We select the earliest and largest ears as soon as the husks begin to dry, and trace them up in small traces and hang them in the sun and leave them exposed to the weather at least two months, and then hang them in a *dry* chamber. Seed corn should not be exposed to moisture, which will cause the chit to swell. A little care in saving seed corn will often prevent much disappointment and vexation.

The editor of the *Prairie Farmer* has some sensible remarks upon this subject. He says that varieties that have a large cob are more liable to be injured than those that have small cobs; that the pith in such cobs retains its moisture so long that it is liable to mould or to freeze, by either of which the chit or germ is killed, even when the body of the kernel is sound. He recommends boring out the pith with a bit, when the cob is very large. This lets the air into the cob and allows it to become dry.

CLEAN CULTURE.

Notwithstanding all that is said in agricultural papers and in Farmers' Clubs of the importance of clean culture, and of the unprofitableness of crops of weeds, we never saw many farms or even fields that were kept clean throughout the season. Like "perfection," in morals and religion, clean culture with most farmers is, at best, only comparative. We confess that in our own experience we seldom succeed in having a place for every plant and in keeping every plant in its place. The theory of clean culture is easy enough, but the practice is so very difficult, that we fear the weeds are increasing on most of our farms. In one of his recent Walks and Talks on the Farm, in the *American Agriculturist*, Mr. J. Harris says, he thinks his corn field is tolerably clean (the result of two corn crops in succession five years ago, and the thorough, almost the excessive, use of the cultivator at that time, together with its free use this season.) But with this exception, he does not know of a single field of clean corn, or clean potatoes, or clean beans. Even the Deacon's wheat stubble, though there is a fine growth of young clover, is far from clean. This is in Monroe County, "The center of the garden of the Empire State," where good farm land is supposed to be worth, and actually sells for, $125 to $200 per acre.

Mr. Jason Smith, of Seneca County, N. Y., the home of such farmers as John Johnston, says in a letter to Mr. Harris:—

In witnessing the operation of a new steam thrashing machine recently, it was disgusting to see how much bulk the feeder had to put through for the quantity of grain. As a general rule, about one-third of the bulk was weeds—and this on farms the owners of which make some pretensions to being model farmers. *Unless we adopt a better system of farming, the weeds and insects will drive us from our farms.* I highly approve of your advocacy of the practice of summer-fallowing, which, if done thoroughly, is a sure, if not the only economical, means of destroying troublesome weeds, such as the Canada thistle, cockle, May-weed, white and yellow daisies, pigeon weed, plaintain, burdock, ragweed, mustard, quack grass, with a host of summer weeds too numerous to mention. Nearly all of these, except quack grass, can be killed by thorough summer-fallowing in a dry season.

In contrast with the foregoing, Mr. Harris gives the following pleasant picture:—

One of my neighbors, a thriving German farmer, has made the sides of the road smooth and level, and this year mowed quite a nice crop of hay from them. He is doing to well too have any thought of selling, but if he had I am sure his farm would sell for $10 an acre more for having such a lawn-like road-side, and for the general air of neatness and thrift which it imparts to the establishment.

Too many of us make the road the receptacle for all the stones, sticks, and rubbish of the farm. The thistles come up between the stones. Mowing the grass is out of the question. The best we can do is to top off the thistles occasionally. I know of few things that would add so much to the beauty of the country as to have all the road-sides made smooth and level, and have the grass cut with a mowing machine twice a year.

SULPHUR IN LOUISIANA.—Prof. Hilgard, of the University of Miss., who has been on a visit to the sulphur deposit in Louisiana, states that the bed was found to be about 100 feet thick without perceptible change. It is pure, crystaline, semi-transparent sulphur. A shaft of 443 feet once sunk to this sulphur bed, the working of the mine would be easy and in the highest degree remunerative—capable, in view of the difficulty under which the production of Sicilian sulphur labors, of control-

ling the sulphur market of the world, and adding to the prosperity of the whole country by cheapening the production and improving the quantity of that great fundamental agent, "sulphuric acid," the preparation of which from impure pyrites is so often a source of annoyance and loss in all kinds of manufactures.

For the New England Farmer.

MEN WANTED.

A few weeks since I cut the following article, with the above heading, from a newspaper that fell into my hands:—

MEN WANTED.—The great want of this age is men. Men who are not for sale. Men who are honest, sound from centre to circumference, true to the heart's core. Men who will condemn wrong in friend or foe, in themselves as well as others. Men whose consciences are as steady as a needle to the pole. Men who will stand for the right if the heavens totter and the earth reels. Men who can tell the truth and look the world and the devil right in the eye. Men that neither brag nor run. Men that neither flag nor flinch. Men who can have courage without showing to it. Men in whom the courage of everlasting life runs still, deep and strong. Men who do not cry nor cause their voices to be heard on the streets, but who will not fail nor be discouraged till judgment be set in the earth. Men who know their message and tell it. Men who know their places and fill them. Men who know their business. Men who will not lie. Men who are not too lazy to work, nor too proud to be poor. Men who are willing to eat what they have earned, and wear what they have paid for.

Is it not lamentably true that there is a great lack of such men as are here alluded to? I think the feeling is quite general among business men that those placed in positions of great pecuniary responsibility are less reliable than at any former period of our nation's history. They are more liable to betray the trusts committed to their guardianship. The prevailing spirit of speculation proves too strong for their integrity. The temptation of great, and (as it looks to them) sure gains impels to the use of funds that belongto others. The salve that quiets their conscience and blinds their eyes to duty is the *expectation* of replacing what they had no right to take. Loss resulting from their first venture, lead to a repetition of the crime in hopes of making it all right in the end. Repeated losses, however, involve them irrecoverably. Many a man who was looked upon by those who knew him best as being grounded upon unswerving integrity has been ruined in this manner. The trouble was that he allowed the first thought in that direction to have a lodgment in his mind. The cases of defaulting bank officials and others of recent date are apt illustrations of this truth.

Another class of dishonest men are those who do business on credit, when they know it is impossible for them to pay for the goods they purchase. A house in this city that reported a surplus of $60,000 last January, failed in less than six months for $120,000. They acknowledged to a creditor that the statements made to him and others in January was false. The excuse given for the falsehood was they hoped to work out in some way. This seeking a desired end by such means is never *safe*, and never *guiltless*. It is not worth while to specify the various phases of dishonesty and trickery that abound, as most are too familiar with them. It has come to such a pass among business men that they are driven to regard *every man* as a rogue, until he has proved the reverse. Heretofore, the farming community have been regarded as a class less subject to this sweeping condemnation. It is not well for us, however, to be too Pharisaical because of this fact. Too many cases of deception and trickery are resorted to by farmers, for us to exclaim that we are more honest than others. How many give short weight, short measure, put the best and fairest on the surface and hide all defects from sight? Far too many, I fear, from what I have seen and heard.

In too many instances in buying and selling stock, the rule of honest, fair dealing is too often departed from. I recollect of a gentleman remarking to me that the worst swindle he ever was subject to was perpetrated by a farmer of whom he bought a horse. Being a *farmer* the gentleman confided in his story, without seeking for a confirmation of its truth. From that transaction he was taught the folly of relying upon a class or calling, supposing it to be composed entirely of honest men. His experience is too common for farmers to call it exceptional.

Money gained at the sacrifice of principle is an illusion. It is not gained permanently. That is, it will take to itself wings and fly away. Reputation also suffers. The whole result is a loss every way. A man may be rich without money. Millions, without a quiet conscience and a contented mind are but a burden to their possessor. A rich man on the brink of the grave would gladly part with all he had for a longer lease of life. Honest men are hard to find, and we should welcome them from whatever source they come.

There is an antidote for all this crying evil to be found in the application of the golden rule to our daily life. I apprehend it is to be found nowhere else. All other panaceas are illusory and disappointing. This cannot fail.

Boston, July 30, 1869. K. O.

For the New England Farmer.

HELP AND STOCK FOR A FARM.

"I have bought the high-priced, fertile farm," said Mr. Bullion, as he met his friend, Mr. Jones, "and now as spring is drawing near, I must hire help to begin its cultivation. What kind of help shall I hire."

"This is, indeed, a question of some im-

portance. Are your help to become members of your family?"

"Yes, at present; though I have considered the plan of building a cottage for permanent farm help. But this year we must be one family, with perhaps two tables."

"Then the most satisfactory help would be smart young Americans, that have always lived on a farm with their parents, and who intend to follow farming for life."

"Are there such persons?"

"Yes, plenty. Among the thousands of farmers' families there are many young men and women that leave their homes, to sell the service of their brain and muscle a few years, for money."

"Yes. But they rush to manufacturing towns or cities, and get larger wages than farmers can afford to pay."

"No. Farmers constantly refuse to recognize the full value of skilled labor on the farm. They let their sons go, and hire a greater weight of muscle for a few months each year, in some Irish, French or German, and accept with it habits of smoking, drinking or profanity. And the farmers' boys soon become skilled in the employment they choose, and however firmly they may resolve to work only a few years away, and return to farm life again,—their labor becomes of such value that they are retained in the cities, where their employment is permanent. But there prevails an idea that the farmer only needs help in summer. So the intelligent, painstaking, energetic young man, not only is obliged to work in competition with the transiens foreigner in summer, and perhaps at lest wages, if he weighs less pounds, but in winter he is a drug in the market; no farmer enlarges his plans and enterprises to give him employment and keep him in the country. So he must go to the city, or take some job at a disadvantage, or keep school in order to earn money. A farmer that has a good horse or ox team will plan to find profitable work for them. But to his son he says 'I can spare you through the winter,' and he is crowded out of the regular routine of farm life."

"Then you would recommend American help, hired by the year?"

"Yes. Such would understand the nature and wants of your cattle; the comparative value of the hay, straw and roots to be fed to them, the treatment of the soil for each crop you raise, and the best way to dispose of the surplus in market. You should hire by the year because it is duty. Winter is a dull time in other trades, yet proprietors retain their workmen as much as possible, so as to be sure of them in the busy season. The farmers' loss may be trifling, yet not as much as would be the workmen's loss if he bore it alone."

"Then $30 per month for eight months, is just as much as $20 for twelve months, and often men can be hired at about these rates. Your idea is a good one of building a cottage and hiring a married man, and if you can make your service desirable, faithful men will be found. And then to enjoy farm life, you must have a happy family, and their happiness cannot be perfect, when all their time is taken to minister to the appetites of such ravenous boarders as farm help often are, when hired because of size and strength."

"Well, if I adopt your suggestions as to help, what stock shall I get," said Mr. Bullion, to his friend and adviser.

"Why! get that you love the most," said Jones.

"That is singular advice. I expect to keep stock for profit and not for love. Every body keeps stock to consume what is raised and make manure."

"Very true; and with that object it matters but little what you get. But you wish to enjoy your country home. Now if there is any thing you love more than another, keep that, whether it be horses, cattle, sheep, hogs, goats or fowls; then whether the market price runs high or low you are contented. But if you have no specialty, then keep what your farmer likes."

"You seem to lay great stress upon affection. I desire to raise what will be a credit to me among my neighbors, and will sell well in market. While I do not care for profit for its own sake, yet I desire it on account of its being the evidence of good management, and I can hardly decide what to buy."

"If one buys what others are dealing in," said Jones, "in hopes of a rise in price, or a continuance of popularity, there is great danger of being led astray. When Merino sheep brought a thousand dollars each, many bought them to get the stock to sell. But when prices came down, their carcasses were sold at a shilling each in market, and there was great haste in getting rid of them. A choice Durham is sold at $5000, or an Alderney for $2000; and Angora goats $500. Now a fortune spent in purchasing does not insure success; if there continues a demand for these animals, it is only the good ones that bring a high price, and good care is necessary, which is the result of affection."

"It is the excellent animals that sell for the best profit on cost of raising. Devotion brings success. Whatever you love so deeply as to plainly show it in the care you give it, and in words of praise spoken in its favor, will attract attention. Those strong words, 'The good Shepherd gives His life for the sheep,' are true ones. Dark nights, stormy days and weary limbs, must not turn away the man who hopes for success, from caring at the proper time for his stock. Some make fortunes in horses, but they have good ones, and love horses."

"If you have no affection for my particular stock, and have faithful, intelligent help, I will recommend large mutton sheep and cows. You can buy good feeding ewes for three or

four dollars each; with good care, they will raise more than one lamb each on an average. These lambs should be four months old in July and bring five dollars each; the fleece two dollars each sheep. Then with a little crowding, these ewes can be fattened to sell in October at five dollars each, making a gain of nine dollars. If you raise full-blooded sheep of any English breed, the profit would be more, as the lambs would sell to other stock raisers."

"A cow will eat, it is estimated, as much as eight sheep. A good one has yielded an income, in butter, of over one hundred dollars in a year, and by selling milk a much higher income. Reference can be given to several persons whose flocks and herds have come up to about these figures. Raising colts, young cattle, or fattening oxen, some times gives a good result. But cows and sheep I recommend as likely to be profitable every year."

Z. E. JAMESON.

Irasburg, Vt., 1869.

For the New England Farmer.

HORSES OF NEW ENGLAND.

Ladies and Gentlemen of New England—I say ladies, because I believe they may justly be classed among the admirers of the horse—to enter into an argument at this period of the nineteenth century, to show that horse stock is an important item in the schedule of national wealth, strength and greatness, would be to admit myself a novice or to assume that I were addressing novices. In no country in the world, perhaps, is such an argument less needed than in our own; and in no part of our country, less than in New England. In few sections are horses either for service or pleasure better appreciated, or a desire and an ability to breed and to keep superior animals more general than in the Eastern States.

The interest of farmers and breeders in the production of valuable animals will depend largely on the profit to be derived from their sale. This profit is increasing and will continue to increase as horse keepers appreciate the fact that it is as cheap to keep a good horse as a poor one. The prime cost being the only difference to be considered; stable-room, feed, grooming, &c., being equal, while the chances for selling at a profit are very decidedly in favor of the good one.

Windham county, Conn., where I live, is not, properly speaking, a horse-raising county. Still there are colts enough raised each year to show the difference breeding between good and poor ones. Mr. Reynolds, of Brooklyn, has recently sold a pair of colts of his raising, right out of the pasture and "green," for $1000,—four and five years old. Dr. John McClellan, of Woodstock, has recently sold two green colts, two and three years old for $600. These are all from the Ethan Allen stock; old "Ethan" being their grandsire. Wm. A. Atwood, of Killingly, has a colt one year old, sired by "Geo. M. Patchen, Jr.," for which he has been offered $400. Mr. Atwood has a two-year-old colt from the same mare, sired by "Gen. U. S. Grant,"—now owned in New Jersey,—of the Pathfinder stock, which is a very valuable animal. I also have a two-year-old stallion, sired by the same horse, out of a Consternation mare, which, in the hands of some men, would be worth $1000. At the same time there are plenty colts in the county, from one to five years old, which can be bought to-day for from $50 to $125.

I think these few illustrations should prove clearly to all horse-breeders the importance and profit of starting right in breeding this noble and most useful of all domestic animals.

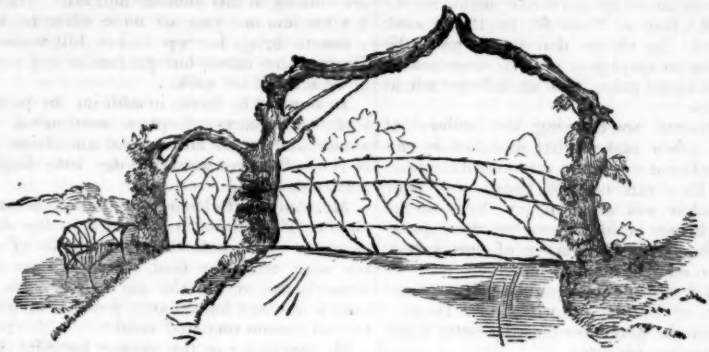
In writing this article, I am not blowing for any particular horse or any special breed of horses. I have no axe to grind; but must say that I do admire "Figaro," by imported Consternation, raised and owned by Orrin Trow, of Hardwick, Mass., "Geo. M. Patchen, Jr.," "Gen. U. S. Grant," by Pathfinder and their stock, the best of any three stallions with which I am acquainted to-day. I also think very favorably of old Ethan Allen and his stock. I do not set myself up as authority in these matters. I have simply given my views or hints in regard to breeding. I don't pretend to be acquainted with all the good stock horses in the country by any means, but have a strong desire to become better acquainted with it. And one object in writing the present article is to call out those who are capable of imparting information which would undoubtedly be as valuable to others as to myself. If there are other stock horses in this vicinity of equal or superior merit with those I have named, I will esteem it a favor if the owner, or others, will give me information concerning the same.

JOHN DIMON.

Pomfret, Conn., Oct. 18, 1869.

NOTHING on earth can smile but human beings. Gems may flash reflected light, but what is a diamond-flash compared with an eye-flash and mirth-flash? A face that cannot smile is like a bud that cannot blossom, and dries up on the stalk. Laughter is day and sobriety is night, and a smile is the twilight that hovers gently between both and is more bewitching than either.

STRIPED BUGS.—H. Capron, Paris, Province of Ontario, assures the *Rural New Yorker* that he succeeds in keeping his grounds clear of the striped bug, by pulling up and burning the vines as soon as done bearing, with the weeds which grow among them, burning them up all clean, believing that he thus destroys the eggs or germs of the incoming crop of bugs.



RUSTIC GATEWAY AND LOUNGE.

The good workman, it is said, never complains of his tools. A trained artist will draw a tolerable likeness of any object with pen and ink, a common lead pencil, a bit of charcoal, or a heated poker. Why, then, may not farmers and gardeners employ the materials within their reach to express their sense of the beautiful? Why should they resort to painted boards whenever they wish to build an ornamental gate, bridge, or seat? Even our house-builders and furniture makers have discovered that the natural veins or fibres of wood, even of our own bird's-eye maple, are fully equal to the more expensive imitations of the "grainers." Why may not, then, the gnarled trees, the crooked sticks and roots, so abundant on our premises, be made to express an idea of

RUSTIC BRIDGE.

the mind as well as subserve a more practical purpose?

To illustrate this principle we copy this month from the *Rural New Yorker* a plan of a gateway designed to separate the garden from the lawn or front yard, in connection with a rustic side seat, and also of a bridge over a brook or ditch. The bridge is made by springing poles and fastening the ends on each bank. These plans are not working models, but simply outlines, to be varied and filled up according to circumstances, the materials on hand and the taste of the builder. In many places such structures would look better, and more harmonions than elaborate carpenter work and gaudy paint, however expensive.

CHEESE FACTORY APPARATUS.

In reply to an inquiry for the cost of the implements, &c., to manufacture 300 or 400 gallons of milk per day into cheese, Mr. X. A. Willard says in the *Western Rural*:—

I. A vat holding 500 gallons with heater underneath will cost at the manufactory about $200. The above price will include smoke pipe, elbow, whey strainer, syphon, etc. For curd knife, presses, and hoops, say $50 to $60 more.

II. It is not customary in New York State for manufacturers to purchase the milk used in cheese manufacture. The manufacturer usually has no pecuniary interest in the milk. He is employed at a salary, or at a fixed rate per pound of cured cheese. When the manufacturer works by the pound, he gets from sixty-three to seventy-five cents per hundred pounds (cured cheese), and furnishes all the labor for manufacturing, care of cheese, &c., furnishing also his own board and that of his assistants. When a cheese maker is employed at a salary, board, &c., are usually furnished by the proprietor, who also employs whatever other help is required.

The salaries of cheese makers vary according to their skill, and the amount of business to be done. In large factories the head

cheese-maker often gets as high a figure as $1,000 to $1,200, and more, for the season (nine months). When a small amount of milk is to be made up, good dairymaids can be employed often at from $8 to 12 per week and board. In cheese dairying it generally pays better to employ a skilful cheesemaker at a good round price, than an inferior one at a low price.

III. Persons commencing the business of dairying, often make great mistakes in employing inferior or second rate manufacturers, because they can be had cheap. A poor cheese-maker will entail heavy losses on the sales of cheeses besides damaging the reputation of the dairy, which last is of more importance than many are apt to imagine.

IV. Milk is sometimes purchased by a manufacturer, or by the proprietor of a factory. In this case the purchaser must fix upon some data to regulate his rates.

Ten pounds of milk is usually considered sufficient for one pound of cured cheese. About two cents per pound is taken as a fair rate for manufacturing, care of cheese, boxing, bandage, &c., and putting it into market. Now if cheese can be sold at 15 cents per pound, about 12 cents can be paid for every ten pounds of milk delivered. The margin, however, is commonly made larger than this, to cover losses on account of poor cheeses, risk of markets, shrinkage of cheese, and other matters connected with the business. We do not pretend to give any exact figures that could be taken as the proper price to pay for milk, but merely allude to the methods, or general data, by which a purchaser makes up his opinion as to the price he can afford to pay. Sometimes when milk has been engaged for the season at a low figure, and the price of cheese runs high, the purchaser clears a handsome profit, and we have known cases, where on the other hand he has made serious losses. The business, it will be seen, is of a speculative character, and has never been popular among the New York factories.

COTTON SEED MEAL.

As furnishing information concerning the use of cotton seed meal, in addition to the few remarks we made recently, in reply to the inquiries of a correspondent, we copy from a contemporary the following notes, by our correspondent, A. W. Cheever, Esq., Sheldonville, Mass., of a visit to some dairy farms in Cumberland, R. I.

Mr. Leander Mory had seven large cows, that I think are the largest and best seven that can be found in one yard for several miles around. They are like the cows of most milkmen, partly fresh and partly drying off. He sells milk the year round, and has his cows come in at different times through the year. He showed me cows that would give as high as twenty-four quarts at their best, that are now giving from twelve to sixteen quarts and are coming in this summer and fall. He says it takes him one year or more after he buys a cow to bring her up to her full capacity. He raises no calves but prefers to buy cows, as he sells all his milk.

In summer he feeds, in addition to pasture feed, two quarts of cotton seed meal. In winter four quarts cotton seed and from two to four of Indian meal per day with English and swale hay.

Mr. Andrew Belcher keeps about the same number of cows and feeds much in the same manner. They both think very highly of cotton seed meal for feed. Mr. Belcher was formerly cautious in the use of it. Now he buys a cow and immediately puts her on a full feed of cotton seed and meal.

He bought a cow this spring for $70, that was claimed by the owner to give twelve quarts. He now milks eighteen quarts from her daily.

Mr. Mory says if he is out of cotton seed one day his cows will shrink a quart each, and neither Indian meal or wheat shorts will keep them up to their quantity, but after feeding cotton seed again one day, they will come up again to their full rate.

Neither of the gentlemen have ever had a case of garget or swelled udder on their premises, which fact does not coincide with the experience of Dr. Loring and some others who think so little of the value of cotton seed meal for cows.

I know of two herds of milch cows in the town of Franklin, Mass., that are fed on cotton seed very freely, that are healthy and free from anything like garget.

In my own experience I have been quite cautious in the use of cotton seed. I have rarely fed more than two quarts per day to a cow. But with such examples as those of Mr. Mory and Mr. Belcher, I feel like using it a little more boldly as it is one of the cheapest grains I can buy, and according to the chemists one of the richest.

In an article on this subject, in the *Rural New Yorker*, Mr. X. A. Willard says:—

Cotton cake does not contain any large amount of mucilage nor anything that produces, on mixing with water, a volatile pungent and injurious essential oil.

Cattle often take at once to it, and even when fed upon linseed cake they soon get accustomed to the taste of cotton cake, and apparently eat it as readily as linseed cake. It contains a very high and much larger percentage of flesh-forming matters than linseed cake. This circumstance suggests that cotton cake may probably be given with great advantage to *young stock and to dairy cows.* As by far the largest proportion of nitrogen of food is not assimilated in the system, but

passes away with the excrement of animals, the dung produced by stock fed upon cotton cake will be found particularly valuable.

In comparison with linseed cake, there is much less mucilage and other respiratory matter in cotton cake. This deficiency is compensated, to a certain degree, by the larger amount of oil in cotton cake. The proportion of indigestible woody fibre in decorticated cotton cake is small, and not larger than in the best linseed cake. Lastly, it may be observed that the ash of cotton cake is rich in bone material, and amounts to about the same quantity as that contained in other oil cakes.

THE WOOL INTEREST.

A stock dealer, who is engaged in buying and shipping sheep to the Cleveland slaughter market, informs us that there is but little, if any, better satisfaction among wool growers in the pursuit of sheep husbandry now than there was a year ago; and that thousands of sheep are weekly slaughtered in Ohio for their pelts.

Flocks of common stock sheep are bought readily at prices ranging from fifty cents to one dollar and twenty-five cents per head; superior lots of fat wethers bring only about $2.50 per head. Very many flocks have suffered much during the past season with foot rot, and such are now thrown upon the market with slow sale at fifty cents to one dollar each.

Ohio does not appear to be alone in the panic, for the wool growers in other States are losing heart, and also in other countries. The Kansas *Bulletin* asks: What is the matter with our wool interest? Is our climate so far modifying that we require fewer woolen fabrics to protect our bodies through the day and keep us warm o' nights? Or is mechanical invention going to supersede the necessity of raising fleeces? The ladies seem to have a rage for underclothing made of paper, and some inventive genius has applied this material to the manufacture of carpets.

Sheep farmers of Vermont and Michigan and other States are losing heart in their property, and contemplate a wholesale slaughter this fall, as only the best grades of wool pay the expense of raising. Indeed the case has grown so bad that a writer in the North American *Review* declares that the millions of sheep which figure in our agricultural returns as constituting so much wealth, ought to be erased from the tables, as they form an element of actual impoverishment.

A correspondent of the New York *Times* also, writing from Brazil, mentions that an inevitable crash awaits the heavy wool interest of that country. "Sheep are going down in price rapidly, and wool is also declining, and it is believed by some that the sheep in that country will go unshorn, as their wool will not pay the expense of shearing and marketing. All the sheep raisers are trying to get out of the business, while thousands of carcasses are every month boiled down, the pelt scarcely paying the cost of the animal. Many sheep farmers who paid two dollars per head for their stock, now cannot sell for one-fourth of that sum, and, as a consequence, sheep are regarded as most undesirable property at all."

Foreign wool interests have been affected by the protective duties passed by Congress, and although the tariff was what this country needed, farmers got their expectations too high, and so multiplied the number of sheep as to over-do the business and bring on a panic.

The number of sheep in the Union more than doubled between the years 1860 and 1866, and increased about two millions between 1866 and the time the wholesale slaughter began.

The Western States were filled up while the excitement was high, and every available sheep used to increase numbers without particular regard to quality. Farmers in New England and the Middle States also lost sight, in a measure, of their future interests, and dropped the proper rules in the principles of breeding and looked only to the multiplying of their flocks; for anything bearing the name of sheep was quick sale, and at prices before unknown. The result of all this is now fully realized, but this reverse will have its end.

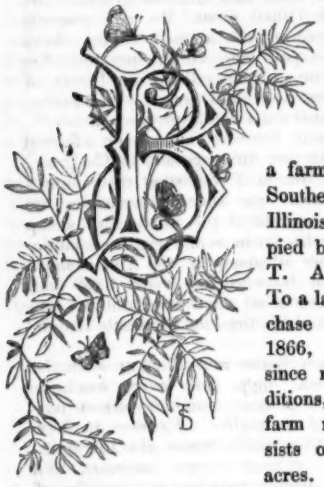
A level will be found in the wool market sooner or later; and we still admonish the farmers to be cautious how they sacrifice their flocks. Sell off the old scrubs at whatever they will bring, for there is no profit in winter feeding any inferior animal. But selling good sheep now for a song may prove as unprofitable as did the buying of inferior flocks a few years ago at big figures.—*Ohio Farmer.*

SHEEP-SKIN MATS.—Make strong soapsuds, using hot water, and let it stand till cold; then wash them in cold water till all the soap is out. Next dissolve half a pound each of salt and alum in a little hot water, and put into a tub of cold water sufficient to cover the skins, and let them soak twelve hours; then hang over a pole to drain. When well drained, stretch carefully on a board to dry. Stretch several times while drying. Before they get entirely dry, sprinkle on the flesh side one ounce each of pulverized alum and saltpetre, rubbing it in well; then lay the flesh sides together and hang in the shade for two or three days, turning them over every day till perfectly dry. Finish by scraping the flesh with a blunt knife to remove any remaining scraps of flesh, and then rub the flesh side with pumice or rotten stone and the hands.

Very beautiful mittens can be made of lamb skins tanned as above.—*Western Rural.*

—Mining has ceased to be the leading interest of California, and wheat is now King. The present years' crop is estimated at twenty million bushels.

AN ILLINOIS FARMER.



ROAD-LANDS is the very appropriate name given to a farm in the Southern part of Illinois, occupied by Mr. J. T. Alexander. To a large purchase made in 1866, he has since made additions, and the farm now consists of 26,500 acres. Cattle-feeding is the leading object in the management of the farm, and about 800 are weekly sent to the New York market, making more than 40,000 per year. By means of dams and embankments on two streams of water which pass through Broadlands, some twelve ponds have been made for watering stock, which cover some 200 acres in all,—one pond containing 50 acres, and is from four to eight feet deep. About 100 miles of Osage Orange hedge have been set out. A row of this hedge runs entirely around the farm. The farm is divided north and south by three road-ways, two miles apart. They are sixty feet wide, and a hedge is planted on each side of them. An avenue 150 feet wide divides it east and west, also set with hedge. Meantime eighty-five miles of post and board fence are set. The posts are driven by a post-driver. The posts are sharpened on two sides, like a wedge, and are found to drive easier and stand better than when sharpened in the usual way.

Breaking prairie has been done in the old way, with five yoke of oxen, in May, June and July. During the last June twenty of these teams were kept running, employing 100 yoke of oxen.

Mr. C. L. Eaton, the superintendent of Broadlands, has been experimenting with trench ploughing, having ploughed last year 2000 acres, which were put in corn, and gave a good crop. A large portion of the corn grown this year was ploughed in the same way. This is done by ploughing a furrow as thin as can be well turned, then a furrow of the lower soil about four inches deep is brought up and thrown on to the sod. This furnishes a seed bed, and enables the crop to be thoroughly worked, producing crops the first year equal to old ground. This process is commenced in April and continued through May.

In sowing for pasture, one bushel of red clover and ten of Timothy are mixed, and one peck of the mixture sown per acre. White clover and blue grass come in of themselves.

Mr. Eaton is trying an experiment this year of seeding with corn. This is done by a fine preparation of the soil by ploughing and harrowing, then planting to corn, after which the whole surface is sowed with the pasture mixture. Of course the corn is not worked at all. By the time the grass is well up, the corn affords sufficient shade to protect the young grass, and it gets a good stand and fine growth. He has seeded 300 acres this spring in this way. It now looks finely. The corn will make a good crop—though less than if worked.

The present force on the farm is 160 able-bodied men, mostly Scandinavians, who receive $20 per month and board. There are six stations on the farm, each with from eighteen to twenty-two men and a foreman and a man cook. The bread is baked daily at the centre station or headquarters, and distributed to the other stations, together with beans, rice, bacon, beef, mutton, fish, sugar, coffee, tea, flour, hominy, potatoes, molasses, vinegar, salt, pepper, dried apples, sour krout and candles. The living is good and costs about thirty-five cents per day.

There are, at present, 4000 head of grazing cattle on the farm; 120 yoke of working oxen; 100 horses and mules, and about 500 hogs. The grazing cattle are brought from Texas. When the arrangements are completed, Mr. Eaton expects to manage from eight to ten thousand head, by the labor of one man to a thousand. There is no disease among the stock. On the north side of the farm there is a strip of land under cultivation six miles long and half a mile wide, and another patch, east of this, five miles long and one mile wide. There are 400 acres of wheat, 140 of oats, 150 of Hungarian grass, 120 of rye, and various patches of potatoes for the use of the farm, and fully five thousand acres of corn;

all of which, says the editor of the *Prairie Farmer*, who rode fourteen miles from end to end of this field, while it was growing, promised a yield of fifty bushels per acre. The wheat and rye were in the stack at the time of his visit and the oats nearly ripe. They were putting up 1500 tons of hay, and expected to save 1500 bushels of Timothy seed. The writer says it is hardly to be supposed that all the operations on this farm are carried on with the same neatness and order that can be attained where things are on a small scale. A little Yankee ingenuity might save time and labor, and less would be done by mere brute force. As a whole, he doubts if any experiment in farming on so large a scale has ever proved so successful as this promises to be.

Value of Books— *For the New England Farmer.*

THEORETICAL AND PRACTICAL KNOWLEDGE.

Nothing can be more erroneous than the idea that all book knowledge is theory, and that knowledge obtained outside of books is experience. The fact is, that books are largely the mere compilations of the experience of the best men connected with the department,—be what it may,—about which they were written. Consequently the man who reads the most has the most experience. But when we act on the experience of others, we must ascertain whether the circumstances under which we would apply it, are the same as those under which it was gained. It is just here where so many have failed in attempting to make the experience of others their guide, or, in other words, in applying what is called book knowledge.

One man for instance, puts his experience with regard to certain fertilizers, or with regard to the method in which they were applied, in a book. The soil on which he experimented was a stiff clay, on which certain fertilizers and certain methods of culture have been productive of the very best results. Another man having read the result in that case tries the same articles of manure and the same methods of culture, with the very worst success, because they were applied to a light sandy soil, which require a different culture and a different management, and at once book knowledge is condemned. The trouble was in disregarding the difference in the soil, and in other circumstances under which the experiments were made. The book or paper was at fault only so far as it fell short of stating the character of the soil and other conditions, which were essential to a proper understanding of the result. But the logic of the experimenter was at fault in attempting to apply the experience of another to a different class of circumstances.

Then, again, there have been those who claimed for books and science that which they were unable to perform. It was claimed, not long ago, that by an analysis of the soil it could be ascertained precisely what particular element was lacking; and this fact once ascertained, the farmer could obtain the article in such a concentrated form that if he could hot carry a sufficient quantity of it in his vest pocket to manure an acre, he certainly might in a common-sized pail! Now the exercise of a little common sense should have satisfied every one that the analysis of soils, sufficiently minute for this purpose, was simply impossible. If we notice the amount of ashes that is left after burning a cord of wood, we shall find that both bulk and weight are very small indeed, compared with the bulk and weight of the wood. What has become of the balance? It has been converted into gas and watery vapor, and returned to the atmosphere from whence they came. The small bulk of ashes is all that came from the earth. Then, again, examine the sap as it flows from an incision, and notice how clear and transparent it is,—clear and limpid as the bubbling spring,—yet it contains every element necessary for producing a crop of luscious fruit or a stately growing forest. How infinitely small must be the particles of those minerals which are destined to form a part of vegetation thus to float in, and form an undistinguishable part of, this clear fluid! How wonderful the chemistry of nature that prepares the food of the plants, and the paints of the flower! How far beyond the tests of our chemists are these minute atoms! And yet if he would detect the atoms necessary to plant life, he must reduce the elements of the soil that he tests in his crucible, to the condition in which they exist in the sap. In the soil of your field or in the rocks from which that soil originated, he may find what he deems the elements necessary to fertility. But we all know that plants will not grow in stones, although they may contain every requisite element. And why? Because those elements are not in a condition to be made available to the wants of the plant. And the cause for the barrenness of many of our unproductive soils, is not because they do not contain the requisite elements, but because these elements are not in a condition to be made available.

Those rocks must be disentegrated, and those finer particles must be made still finer by heat and frost, by rains and air, aided by the plough, the harrow, the cultivator, the hoe, the spade and the rake.

When you give your soils or your rocks to the chemist he pounds them in his mortar; he applies heat and acids to reduce them as nearly as possible to their primitive elements, before he can ascertain what they consist of; and farmers have to do much the same thing, but

on a larger scale, to make them available to the plant. They must be finely divided in the field as well as in the chemist's crucible. When a piece of land is what we call run out or exhausted, only those elements which were available to plant life are used up; and we must either wait the slow action of heat and cold, rain and air, to produce those available elements from the soil, or we must apply them in a condition already available, and generally known as manures or fertilizers. The chemist, therefore, may be able to decide whether the elements necessary to fertility are in the soil; but with all his science he cannot determine whether those elements are in a condition to be immediately available as plant food. This vegetation alone can decide. T. W.

Boston, Mass., Nov., 1869.

For the New England Farmer.

SPARE THE BIRDS.

Thus will every man who has any interest in the soil, and who is worthy of the human form, exclaim with me, when he has had the same instruction that I have had on the subject. Idle boys! rambling about, shooting birds from mere wantonness, have you never been taught by your parents or guardians that it is morally wrong for you to commit such piracy upon the feathered "tenants of the air," without any other motive than that of indulging in the debasing sin of cruelty? If you have never been taught this, much less, perhaps, have you been taught that it is physically wrong, and against your own interest and that of your neighbors.

But it may be asked, why am I so interested in the birds, and of what consequence are they? I am interested in a pecuniary point of view; they save and protect my property, and yet they do no more for me in this way than for every other man who tills the soil, or who is fed by the proceeds; and yet, people, regardless of their own interests, will suffer them to be destroyed!

A week or two ago, I was walking in a corn-field, witnessing with no very good humor the devastation by the grub-worms; whole square rods being cut down by these underground destroyers, with not a blade left? There, said I, go my labor and expectation through the long and weary days of spring! Thus I moved on, and observed many hills with the blades left untroubled by the worms, but a small hole was bored down an inch or two deep, close to a corn blade in each hill. This, said I, is the work of the felon crows; what the grubs leave, they can destroy,—thinking that they made the hole to rob the blade of the kernel. But observing the great number of perforations and no corn pulled up, as is the usual manner of crows, I dug down, and to my surprise, found the kernel there. Then the truth flashed upon my understanding,—this is the work of the birds. In the morning when the grubs are near the surface, and close to the corn blades to begin their gluttonous work, the birds instinctively dig down with their beaks, seize and devour the grubs, or bear them away to their young ones; thus saving thousands of hills from the common destruction.

Again, have you never observed in sultry weather before rain, the swallows fly skimmingly through the air near the earth? They are catching insects that are forced by some change in the atmosphere above, to take possession of its lower strata. And so their invariable occupation is brought before our observation; namely, that of destroying the myriads of insects that poison our atmosphere, and render it malarious and pestilential. I wish that State Legislatures would enact severe laws that would place such idle bird killers in the houses of correction of their respective States, where they can be effectually reformed in this respect.

Parents and guardians, I entreat you, use your best influence over your children and wards and stop such outrages; take the green-hide if necessary, but by all means prevent it. Again I say, "spare the birds."

The foregoing, written by myself, was published in the Boston *Cultivator* twelve years ago. Time has only confirmed the truth of the assertions then made. The present year I have cultivated a piece of corn on the south side of a contiguous wood, where many birds had their nests. The ground was apparently filled with grub worms, as the hoe frequently brought them up in sight. I noticed the diligence with which a pair of robins examined the corn rows; pausing with head erect a moment, then running swiftly along till with a sudden dive and motion of the wings they would seize a grub and bear it to their nest in the wood, then immediately return and recommence the search, coming up fearlessly within fifteen feet of me, knowing, perhaps, that I was their friend. My corn was eaten but very little, while as I learned from a neighbor that his, which was not situated near the woods where the birds were so plenty, was badly dealt with, and he was obliged to go over the rows and dig the grubs himself.

I have heard some so-called farmers complain that the robin redbreast and the gold robin eat their cherries and green peas, as though those were all the crops they had to lose. What little they might lose in that respect was doubly repaid by protection of their field crops.

Naturalists seem to be divided in opinion as to the usefulness of the crow. One of your correspondents, not long since, declared from personal observation that the crow lives largely on the offspring and eggs of birds. I am at present inclined to credit the charge, for many a time is the vagrant crow seen flying over our fields with half a dozen small birds on his back, pulling at his feathers, and as many more in the chase being eager to assault him as a common enemy. They know, doubtless, who are the invaders of their domestic castles, better than we do. I, for one, have suffered much from the depredations of the crow in the corn-field patiently, believing that his virtues more than compensated for his faults, but if the charges of your correspondent are to be added to his other crimes, let him be exterminated!

Epping, N. H., 1869. M. J. HARVEY.

—A Champaign County, Ill., correspondent of the *Country Gentleman* says he doubts whether Central Illinois has raised more than half wheat enough to supply the bread eaten therein for the next year.

For the New England Farmer.

SUCCESSFUL FARMING.

It is reasonable to suppose that the millions of farmers now laboring to produce food for themselves, and to feed the cities, desire success. Consider then, What is successful farming? It cannot be measured by the amount of money accumulated.

1. The fertility of the soil is stock in trade.
2. The health, strength, vigor and honesty of manhood, is stock in trade.
3. The happiness of a wife and family is stock in trade.
4. The reputation of the business is stock in trade.

All these may be exchanged for money. And the barren exhausted soil, the premature old age, the scattered family that hate the farm, make farming in the greatest degree unsuccessful, notwithstanding the amount of money for which this stock is bartered may be large.

This is shown by the deserted farms and hearthstones in all the older parts of the United States. Fertility, strength and reputation have gone with the crops of grass, corn, tobacco and cotton.

We therefore conclude that the four items mentioned must all be in a good degree retained, and a fifth added.

5. Money accumulating.

These items should be regarded in the order mentioned. If the last is put first in the estimation, the money accumulated becomes money deposited, and the affections and anxieties are entwined around it so powerfully that it draws the first four away from the farm disastrously.

Consider, now, how successful farming is manifested or shown.

1. By the productiveness of the soil in judiciously chosen crops and the thrifty cattle, safe, tidy and convenient buildings and fences.
2. The enjoyment, satisfaction and pride experienced by the farmer and family in his pursuit.

A discontented man shows it in his management, and it brings a reproach upon his trade. It is desirable and right for one to feel a pride that he can so co-operate with Nature in bringing about glorious results.

3. By the esteem felt for, and respect shown to the successful farmer by others of the craft and by the public!

Successful generals have their triumphs or grand receptions. Lawyers sit on the judges' bench, and in the senatorial chair, and their words of wisdom are treasures to others of the profession. The eminent doctors and divines, each in their sphere, receive reverence and respect.

A few farmers in centuries past became noted. But in this age of enlightment and mental activity, all successful farmers should become well known and honored by those around them, and by the tillers of the soil throughout all lands. *Abundance, enjoyment* and *fame* are results. Consider now, the combinations that tend to make farming successful.

1. Theoretical knowledge; because there should be an idea how a thing is to be done before it is attempted.
2. Practical knowledge; this should in part be gained as an apprentice, so that the result of failures may be, where it belongs, a loss to instructors.
3. Executive ability; without which knowledge cannot be well applied.
4. Favorable circumstances; or, in other words, the blessing of God, shown in health, favorable seasons and providential care.

Agricultural colleges are one of the means to increase knowledge. Z. E. Jameson.

PRUNING IN AUGUST.

The *Germantown Telegraph*, in an article on pruning apple-trees, makes the following statement, which is published for the benefit of those who have orchards to take care of. Most of our orchards have been badly managed, as their appearance and condition show. Generally they have been pruned in spring, a time now considered injurious to the trees. "Here, at the North, we have no class of people more successful with orchards than the United Society, or Shakers. They consider their trees as organized productions, capable of being improved by proper care, and injured by neglect and mismanagement. Of course, they are careful to see them fed with proper diet, and in all respects dealt with as things of vegetable life, having constitutions to be protected and preserved as they should be. We were passing their village at Mount Lebanon, New York, last August, and found them engaged in pruning some beautiful apple-trees by the way-side. The novelty, to us, of seeing pruning performed at this busy season induced us to inquire why it was done. The reason given us was, that at that season the sap was thick, and of course would not run to waste, and that, if pruned then, a healing process would commence which would eventually cover the wounds, and protect the tree from all damage through cutting off branches. In a subsequent visit to the society, we were invited into some of the orchards, which had for years been subject to this system of pruning, and it was a luxury to see their healthy trees, free from the wounds of injurious pruning, and, in some instances, with scarcely a scar to show the operation had been performed."

Corn Fodder.—Lyman Call, East Durham, P. O., writes the Canada *Farmer* that he keeps a dairy of twenty-six cows, the milk of which is disposed of at a cheese factory;

that last June he sowed an acre of corn in drills, and commenced cutting and feeding to the cows the first of July. When the September rains came on, he omitted the corn feeding four days, and the result was a diminution of fifty-two pounds of milk per day. The corn feeding was again resumed, and in four days the cows gave their customary quantity of milk. The increased flow of milk doubly paid the cost of the food given.

SHEEP-SHEARING BY MACHINERY.

Machines for shearing sheep and milking cows have been invented, and they have been used sufficiently to demonstrate the possibility of performing both operations. City cows have been milked, and city sheep have been shorn by machinery. But in the country, farmers are still obliged to milk their cows and shear their sheep by hand—not the only difference between city and country farming! Some of the "farmers" of New York city have recently witnessed the operation of two different sheep-shearing machines. A committee was appointed by the New York Institute Farmers' Club of that city, to see two sheep sheared by these machines, and here is the report that they made of the working of each of them:—

The machine of Mr. Anderson cuts the wool on the same principle as a mowing machine, being driven by compressed air, conducted to the shears through a rubber tube from the bellows, worked by a crank, and turned by a second person. The machine is very ingenious in its construction, and when sharp will cut the wool closely and rapidly; but it gets dull quickly, owing to the delicate construction of the knives. The power is not sufficient to clear the knives of the wool, the machine presenting the same difficulties in operating that a mowing machine does in thick, wet grass. Without increased power and an ability to keep sharp longer, and not to clog so easily, the committee could not commend this machine, but yet it has some decided merits, which are the closeness and evenness with which it shears.

The machine of Mr. Earl shears with a rotary knife with two cutting points, rotating on a bed plate with notches or guards which rest on the body of the sheep, and is attached to a universal joint, connected by a revolving rod to a wheel, turned by a belt driven by a crank and wheel turned by a second person. The machine is easily adjusted, and the universal joints will turn in any direction, allowing the shearer to work the knives without the least difficulty on any part of the sheep. The committee are of the opinion that in the hands of an experienced operator the machine will do good work.

EXHIBITION OF WOOL.—The American Institute, as will be remembered, made a very liberal offer of space at their late Fair in New York, for an exhibition of wool. It was hoped that the wool growers of the country would make such a show as would indicate their ability and their purpose to supply our own manufactories with the various grades of wool required for the woolen fabrics they produce. They have failed to do so. Col. Harris, of the *Ohio Farmer*, visited the Fair which was held in the Skating Rink in the north part of the city, and says, "I hunted the Rink all over for the much-talked-about show of wool, and found about enough of fragments to make two fleeces!"

EXTRACTS AND REPLIES.

PREMIUMS AND STATEMENTS AT FAIRS.

At the last fair of the Middlebury society, held at Concord, I had a number of articles for exhibition, and among them twelve pounds of butter. Upon examination, the committee said it was the best on exhibition. But as I did not state the temperature of the cream when churned, they declined to award it the first or any premium. I gave what I thought to be a full and correct statement of how it was made, supposing the object in requiring a statement was to get information. The committee, however, awarded the premiums to those who made their statements according to the requirements of the trustees and not to the best article. The committee put the card for the first premium upon a lot of butter which they themselves admitted was not the best, and it stood there exposed to the gaze of thousands, indicating not the best butter but the best statement. Consequently the statements took the premium, not the butter. Now I contend that this is wrong. If the committee could not give the best article the premium, because of a little defect in the statement, then I say withhold it from any one until another year. To give premiums to anything that may be brought in, because the statement is up to the requirements, is to encourage skilful writing, not good butter-making. I enclose a copy of the statement I made, and am confident that any one who follows that method cannot fail to have the first quality of butter; but at present I do not wish the statement published. A BUTTER MAKER.

Middlesex County, Mass., Oct. 23, 1869.

REMARKS.—One object of awarding premiums at agricultural fairs is undoubtedly to reward and honor skill; but another, and perhaps a higher object, is to collect and disseminate information. It is desirable and pleasant to look upon a nice article of production or manufacture, but with our Yankee inquisitiveness, we are very apt to ask, How was it done? or, How was it made?

We have known societies who made no provision for an answer to any such questions, but awarded their premiums on the apparent merits of the articles or animals submitted to their inspection, and left the public to find out the secret of superiority as best they could. This course has been so unsatisfactory that the managers of our fairs now generally require a more or less full statement from those to whom premiums are awarded. If they are justified in demanding any statement at all, must we not concede to them the right of specifying the character of that statement, and to indicate the points on which information is desired?

There has been considerable discussion by butter-makers of late, as to the proper temperature of cream for churning. The managers of the Middlesex society may have wished to settle this point, or at least to learn the practice of the butter makers of the county on this one subject. If they offered their premiums on condition that this fact

should be stated, would it be right for them as law-makers to become law-breakers?

The best rules and the best laws may seem to operate unjustly in individual cases. It certainly seems unjust that, as in the case of our correspondent's butter, the poorer article should have worn the "blue ribbon," but under the "rules" imposed on the awarding committee, we do not see how they could have done otherwise. As farmers make little pretentions to skill in drawing up legal documents, might there not be a provision by which, as lawyers sometimes do, they could amend their statement so as to meet any requirement that might have been overlooked in writing it out.

With the exception of the omission which our correspondents admits, his statement is full and clear. Even the temperature of the milk room is given, and, as he says, we think the details which are stated would enable any one who followed them out to make premium butter. And we sympathize with him in his disappointment in finding that the omission of a statement of the temperature of the cream when put into the churn should have given to another the honor which otherwise was so justly due to him. And we venture to express the hope that next year he will exhibit not only the best butter but the most complete statement of any dairyman in the county.

TO HIM WHO BUILDETH A BARN.

I wish to make inquiry, 1st. Have you decided on a plan for its construction? If so, let me ask you to reflect much upon that plan and be sure that it is the best one possible for your location. You will build for the use of yourself and coming generations, and how important that it be so arranged that you and they may accomplish the greatest amount of work in the least possible time. At times you will have to "pitch off and mow away" a load of hay or grain when a quarter of an hour may save the wetting of a ton of hay or a load of grain, and a consequent loss. Is that plan of yours so arranged as to save the most time and labor in unloading? If so, you will have an *attic* floor or drive way in the roof. It is the cheapest help a man can have to "mow away" crops, and will save you a large interest on its cost. No man ever regretted making this labor-saving machine, who had used it two seasons. Such a floor way in the roof is also the cheapest and the best store-house for carts and wagons in winter.

You also will have to spend many hours during the cold winter days in "doing chores." Does your plan arrange your stables and feeding pens for all kinds of stock so as to be got at with the least waste of time, strength, fodder and comfort? If so, you will be able to review your whole regiment of animals almost at a single glance.

Of course you have a cellar for manure, &c. But is it an *attic* cellar,—a cold frozen space above ground,—or a warm cellar, mostly below surface, where manure will not freeze nor pigs nor poultry suffer?

Think well, my dear sir, on the plan of the barn you are to build, being careful not to copy the commonest size, or the exact arrangement of all the old barns in your neighborhood, if it is possible to do better. Do not be afraid to strike off on on a new style of your own, if satisfied that it is an improvement. Never forget that it costs no more to shingle a tall barn than a low one; that it is much less expensive to keep in repair one large barn than two or three small ones, and that it is much easier to pitch hay and grain "*with* gravitation than *against* gravitation."

If in debt, you cannot afford to build without an upper drive way, even on level land. C. F. N.

Randolph, Vt., Nov., 1869.

THE THOUSAND-LEGGED WORMS.

Some two years ago Mr. George B. Hale, of Dover, Mass., sent us specimens of these worms, known as the American Myriapoda, Centipedes, Millepedes, &c., and stated that they were greatly injuring his crops, having in one case destroyed a field of turnips, in which they were so numerous that he had counted no less than five hundred on a single turnip. The annexed cut of these worms is copied from Prof. Tenney's late work on Natural History. Though we had occasionally found them on potatoes and turnips, we had supposed, as taught by such scientific men as Professors Harris, Tenney, &c., that they were comparatively harmless, as they were said to feed on dead, decaying, or diseased vegetable matter, and not on that which was live and healthy. A similar reply was made by Prof. Asa Fitch to a communication in the *Country Gentleman*, by a man in Pennsylvania who complained that these worms had almost totally destroyed every thing of a vegetable kind in his garden for the last three years, including strawberries, cucumbers, radishes, beans, onions, &c.

Prof. Fitch has, however, since that time paid particular attention to the habits of the Millepedes, and he now says:—

"Within a few years past, I have had these worms under particular examination, and can now present most conclusive evidence, showing that they are not harmless and inoffensive, as writers have taught us to believe, but that they attack and devour with avidity tender succulent vegetation which is in a perfectly healthy and growing state, and that they are liable to become so multiplied in our gardens as to be one of the very worst pests with which we have to contend."

BURSAL SWELLING.

Sometime since I wrote you in relation to a swelling upon a cow's knee, which you termed a bursal swelling, and directed me to open it and bandage with a compress bandage. I did so, twice, but it filled again in twenty-four hours. If you know of any other remedy please inform through the FARMER. J. H. BOURNE.

Groton, Mass., Oct. 23, 1869.

REMARKS.—Such swellings will often fill up, as this has. Surgeons sometimes make a small opening, squeeze out the contents, and inject with a syringe, a solution of sulphate of zinc, half an ounce to a pint of water, retain it a few minutes and then empty it out and apply the bandage. Repeat this several times if it fills up. But we think it would be better to consult your family physician, if there is no intelligent veterinarian in

your neighborhood. It is a somewhat nice operation, and we presume that your doctor would be willing to assist you, and as it is somewhat out of his line of practice, would do so rather as a neighbor than as an expert.

SPECIAL FERTILIZERS.

I would like to ask you a few questions, which you will please to answer in the FARMER, it may benefit others as well as myself. It is said by Agricultural Chemistry that plant food may be divided into four necessary elements; these must exist in the soil. The absence of either deteriorates the strength of the plant and weakens its productive powers. The necessary elements are: potash, and lime. These four elements, it is said, make a complete manure. Now, what I want to know is this: What proportion of each of these elements does it require, and how mixed, and should muck should be added? Will it pay to buy air-slacked lime at $1.25 per barrel for a fertilizer? Are hard coal ashes worth drawing two or three miles to apply to land? ASA WARE.

Palmer, Mass., 1869.

REMARKS.—The proportion of the several fertilizers is of little importance, provided there is enough of each; neither is it necessary that they should be mixed. In many cases it is more convenient to apply them separately.

We think the lime will pay if you have good material to compost it with. We have found coal ashes worth more applied to currants, peach trees, and other trees, to keep off the borers, than to apply to grass land.

The manner of drawing it must depend upon circumstances. It certainly would not pay to hire a team to do so; but opportunities may occur when you could do it with your own team, possibly at a remunerative cost. Its value, however, as a fertilizer is generally considered as very small.

PRESERVING NEW CIDER.

Will you inform me through the FARMER how to prepare new cider for bottling, so that glass bottles will hold it? H. C. NICHOLS.

Pittsfield, Mass., 1869.

REMARKS.—Some persons add a pint of mustard seed in a cotton bag, to a barrel of cider; others throw in three quarts of barley, and state that it will keep it sweet. A sure way is to filter it through clean sand. Let it run slowly from the barrel into a tub nearly full of sand, and from the tub pass it into another barrel. These are easy and cheap modes. There are undoubtedly others, with which we are not acquainted.

SICK CALVES.

I have some calves that are sick and seem to have a trouble like consumption. They cough and grow poor; act dozy; their eyes run, and look red. Some of my neighbors' calves have died of the same disease, and I expect to lose mine unless some remedy can be found. Can you or some one of your subscribers recommend something beneficial, and greatly oblige G. W. A.

Milton, Vt., Nov., 1869.

REMARKS.—We have shown this statement and inquiry to several of our neighbors, but are uncertain as to the disease, and consequently as to the remedy. We have thought it possible that it might be caused by minute worms in their windpipes, which Mr. V. M. Hubbard of Rochester, Vt., lately said in a communication to the *Woodstock Standard*, often occasion great mortality. He recommended the following remedy:—Asafœtida, three ounces; aloes, three ounces; vinegar, one quart. Boil together till dissolved. Give each calf a tablespoonful in each nostril every third morning, taking care to hold the head well up to prevent waste.

A CRIPPLE AS SHOE-MAKER, GARDENER AND HOUSEKEEPER.

I wish to say a good word for a crippled occudant of one of the little brown cottages in this town, who in his youth lost one of his legs, and since the death of his parents has lived alone, and though in feeble health has nearly supported himself by work on shoes, and in his garden and house. He keeps a cow, takes care of the milk, and makes butter that no dairywoman would be ashamed of. He also keeps a pig, and his sausages, souse, &c., are equal to that made by any housekeeper in the neighborhood. His house is always clean, and everything in it is kept in order. His garden is cultivated very neatly, and produces all the vegetables grown in our climate, and his front yard is so tidy and well kept as to attract the notice of the passer-by. He is now over sixty years of age, and of late his solitude has been enlivened by a small child, which lives with him. He is ever ready to entertain those who call upon him, and whether their mood be gay or grave, all find in him a genial companion, and they leave with their sympathy excited for one who, though a cripple, has done what he could in a world of activity and usefulness. L. R.

West Salisbury, Vt., Nov., 1869.

GARGET IN COWS.

Many diseases or irregularities of the bag, the teats and the milk, are popularly called among farmers *garget*. For the most common of these, such as swelling, caking of the milk, small lumps in the teats, causing great pain in milking, inflammation of the bag and similar troubles, there is a simple and specific remedy, which has been successful in many cases. One ounce of Hydriodate of Potassium dissolved in one pint of soft water. Dose for a full grown cow—one large spoonful mixed with a little bran mash, twice or three times a day, according to the virulence of the disease. It should be used with caution, as it has a tendency to dry up the milk. L.

Boston, Mass., Nov., 1869.

—Gilbert Whipple, of Sheffield, Lorain County, O., while examining a head of wheat, a short time ago, shelled out the grain and tossed it into his mouth. One of the kernels was not divested of its shell and beard, and the beard soon reached the throat, where it lodged, and no effort could remove it. It soon became very troublesome and painful. Swelling followed, succeeded by suppuration, but still the beard was not carried off. A second swelling and breaking failed to bring relief. It is difficult for the sufferer to take necessary food, and his case is said to be both painful and alarming.

SEEDS: THEIR ORIGIN AND VITALITY.

Few employments in life afford to those engaged in them so many interesting phenomena as that of the farmer. Changes take place in his trees that he cannot account for; such as blossoming in September instead of May. Curious and unthought of qualities appear in the progeny of his stock, and unknown plants spring into life in the soil and *on the rocks*, which make his *thinking powers ache* in the attempt to find where they came from, and what they are.

A well was dug in the early part of winter, and the earth thrown out from a depth of thirty-five feet below the surface. Some portions of this, from the lowest point, were immediately hauled away and deposited in a heap. Quite early in the following spring, signs of vegetation were observed, and in July, a luxuriant growth of plants covered the ground! What were they? Where did they come from? How did the seed get thirty-five feet below the surface? No other plants in the neighborhood were like these!

In ditching, the farmer throws out banks of soil, some of it four feet below the surface, which are often covered the same season with plants that have not been seen before in that locality. Where did the seed come from? If the same kind of plants grew in that vicinity before, the winds, or the birds, or the squirrels, might have taken the seed to this spot.

How came the seed at the bottom of the ditch dug in the swamp? On this point there are different opinions. In the first chapter of Genesis, and the eleventh verse, it reads:—

> "And God said, Let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after his kind, *whose seed is in itself*, upon the earth: and it was so."

The seed, then, must have been created before the tree grew. The seed was upon or in the earth; but when the plant had matured, it had seed perfected in it, and was thereafter capable of propagating itself.

A common opinion is, that all seeds were originally deposited in the earth at the creation, and that they have been mingled with the solid earth in every conceivable situation,—in some instances near the surface and in others at immense distances below it, where the temperature is always so low as to prevent germination. This has been brought about by the convulsions of nature,—by travelling glaciers, earthquakes, land-slides and volcanic action, upheaving the earth in one place, and depressing it in another; so that if all seeds were once upon the surface of the earth, they have become mixed with it, and are now found in most places where excavations are going on.

But others entertain a different opinion; believing that the work of creation is still going on, and that when such cases occur as those alluded to, the seeds *have just been created*, and especially placed where the plants sprung from them. One of the most learned persons of our acquaintance, a "doctor of laws," and a studious, Christian gentleman, has stated to us that such is his belief. What evidence he can adduce to justify such a conclusion we do not know; nor do we know of any, besides that alluded to in Genesis, to warrant the belief that they were all created as narrated in the Mosaic account.

If they were created "*In the beginning*," their powers of *vitality* are as wonderful as the creation itself. Through how many inconceivable ages must a grain of mustard seed, for instance, have laid in the dark chambers of the earth, and apparently as lifeless as the stones around it! And yet, when brought into the genial sunlight, moisture and air, how quick it has burst into life and activity, and invited the birds into its branches to build their nests there.

Does not this afford us hints, or give us positive assurance, that any seeds may be preserved with all their vital powers unimpaired, if we but place them in favorable positions, as nature seems to have done! It would seem so; but we find seed laid away below the action of frost, throwing out a germ, perhaps, and then decaying. They are too deep to spring up to the light and air, and yet fail to preserve their vitality. Who can explain this?

Most of the seeds commonly used by farmers may be preserved with their full powers for several years in succession, by placing them where there is a dry, even temperature at about forty-five or fifty degrees. In such a position, and put up in brown paper bags, seeds will keep good for an indefinite time. But with ordinary care, beans of all kinds will keep good three or four years; beet seed, the

same; carrot, two to three; corn on the cob, three or four; cucumber, eight to ten; cauliflower, five to six; onion, two to three; parsnip, the same; pea, five to six; pumpkin, eight to ten; squash, the same; lettuce, two to four; melon, seven to ten; turnip, four to six; and radish, three to five years. We have no data as to the keeping of grass seeds, but have no doubt that if kept in a proper place, most of them would retain their vital powers for several years.

This is an interesting topic, and the more we know about it, the greater will be the probability that we shall make farming profitable as well as interesting.

VERMONT HORSE STOCK COMPANY.

The Legislature of Vermont meets in October and adjourns "before Thanksgiving." Though the celebration occurred earlier than usual this year, the business of the session was completed in time for the members to reach their respective homes, where alone this old New England festival can be fully enjoyed.

Among the Acts passed at the last session of particular interest to farmers, not only of Vermont but to those of adjoining States, is the charter of a horse stock company, for the outlines of which we are indebted to a correspondent, and a gentleman who has long been one of the most active of the intelligent farmers of that State in efforts not only to sustain the reputation of Vermont horses, but to secure improvement in their breeding and management.

The Company is chartered with a capital of $100,000, and has liberty to increase it to $250,000. It is proposed to buy, import, breed, grow and improve horses in Vermont.

The charter does not allow operations to be commenced until $25,000 are paid into the treasury, and the debts are never to exceed two-thirds of the cash capital paid in. In case they do, the directors or persons so contracting them are to be personally liable therefor.

If the full plans of the movers can be realized, Vermont will have the finest stock of horses in a few years to be found in America.

The plan is to have a farm of some 300 acres, comprising some of the best pasturing in the State, with best of stables, sheds and paddocks; the farm to be thoroughly fenced for horses, and worth, say from $20,000 to $25,000.

For stock, it is proposed to have half a dozen of number one thoroughbred mares, if they have to import them; at least one first class thoroughbred stallion; half a dozen mares from the "American Star" family, and one of the best Hambletonian stallions to be found in that celebrated family of trotters; also, some ten to twelve of the best Vermont breeding mares, and one or two of the very best Vermont stallions.

Such a stock on the best Green Mountain soil, under the care of a skilful breeder, with capital sufficient to perfect it, cannot fail to return a profit, and add millions to the wealth of the State.

To succeed in any enterprise, capital is very necessary. In all business movements that are to work great and good results, men have almost always found it absolutely needful to form associations and combine capital. Such companies, working with such powerful capital, begin, forward, and complete nearly all the great material improvements of our age.

The horse breeders of Vermont are generally men of means quite too limited to perfect even a small *family* of horses. They do well to manage so as to raise the stock to perfection from one brood mare. Generally they have to sell one or two years too young for profit, and must let those go that will bring the most. This "takes the gold and leaves the dross."

It is this *necessity to sell the best*, which calls so loudly for a combined capital, so as to secure and retain at least a small family of the very best horses, and to improve them.

When Vermont starts with the best horses and those of the best blood, and has capital enough to breed them in the most perfect way, and grow them to maturity, she will soon show to American horsemen that the best are to be found among her green hills. We hope soon to see this company organized, the stock taken, and the thing set a going.

BUTTER MAKING.—A lady distinguished for her excellence in housewifery, and interest in all that pertains to agricultural pursuits, informs us that last winter she lost three consecutive churnings because the "butter would not come." She put the cream into the churn

at a temperature of 62 degrees. After churning a few minutes, the cream became frothy; and although urged and coaxed to become butter for three hours, utterly refused to do so. At the fourth churning, she raised the temperature of the cream to 67 degrees, and the butter came in the usual time, and in excellent condition. This course has been uniformly pursued since, and always with the same result. It is so simple and easy that all may avail themselves of it in winter churning.

For the New England Farmer.

WHEAT CULTURE.

Your editorial in the FARMER of October 16, took my attention, and I would like to ask you a few questions respecting the mode you recommend of raising wheat. You stated that wheat should be planted not sown; but do not explain how it should be done, or what tools should be used.

Would you recommend the dibbling system? Would you do the work with the hoe? If you recommend dibbling, will you be kind enough to state what it costs per acre; if you recommend planting with the hoe, what will that process cost per acre? Is there any other mode that is convenient to farmers generally, especially those with small means?

Next spring I shall,—if all is well,—sow four acres with wheat. To plant the same, how many hands shall I need to employ to have the work done in season; leaving alone the time that will be required to get in my corn, oats, barley, potatoes, &c.? By *planting* wheat, shall we get as much straw as we do when we sow two bushels to the acre? If we get more wheat and less straw by planting, can we make as much manure from the straw from planted wheat, as we can from wheat sown as plentifully as is usually done? I am aware that we sow wheat for a crop; but should it be our object to get the largest yield of wheat and little straw; or an average yield of wheat with plenty of straw, to make manure for future crops?

You refer to Mr. Mechi, of London, and his large yield of wheat, forty-six bushels to the acre, weighing sixty-six pounds to the bushel. Would you advise farmers generally to adopt his mode of cultivating land, as the most profitable? If it is, why do not the farmers of England adopt it?

Speaking about the weight of wheat to the bushel, and about wheat deteriorating by sowing two bushels to the acre, I will say that is the quantity I sow, and that I have sown the same sort of wheat for the last six years. I have to-day wheat grown this year that weighs sixty-four and one-half pounds to the bushel. I had two acres and three quarters, of which one acre was badly eaten by worms, but yielded sixty-five bushels, good marketable wheat. I had seven loads, averaging twenty-six stooks to a load, twelve bundles to the stook. Should I have had the same amount of straw if I had planted the wheat? I seeded the same with herdsgrass and clover, and when I cut my wheat the grass and clover would average six inches high, and some of the clover was headed out.

Now, Mr. Editor, I ask these questisns in good faith, hoping you will answer them and give the readers of the FARMER something to talk about besides Norway oats and Early Rose pota'oes, of which I think we have had a good share.

I do not wish it to be understood that when I speak about any of the modes of farming in England, I claim that they are the best and most suitable for this country; but as you refer to England many times in your editorials and other items, I wish to lay before your readers some truths with which I am perfectly familiar. I am acquainted with dibbling, drilling and pressing land for wheat upon clover leys, and can speak from experience. This I propose to do at some future time. Pressing wheat after the drill, and other modes of culture, may answer in this country, especially as the white wheat is apt to heave out with frost.

You say when the time comes that we plant, hoe and cultivate wheat, a part of the extra expense will be paid by the saving of seed. I am aware that there would be a great saving of seed; but could we make it profitable with wheat at the present price? When the English farmers dibbled their wheat its market price was one guinea, or over five dollars, per bushel, and one bushel would pay a laborer's wages for a week! If the time ever comes in this country, that wheat shall be five dollars per bushel, and the laboring man be seen going home with one bushel of wheat upon his back as payment in full for one week's wages, I would like to know where rent, clothing and other necessaries are to come from, provided that laborer has a family.

At some future time, I will give you the whole mode of wheat culture practiced in Yorkshire, England, where I came from. It is a part of the country where all sorts of grain are grown; where, in fact, grain and stock are their staple products, to pay taxes, rents and wages with. E. HEBB.

Jeffersonville, Vt., Nov., 1869.

REMARKS.—It is easier to ask questions than to answer them, especially where they are of the direct and searching character of those of our intelligent correspondent.

Perhaps his four first questions will be satfactorily answered by the remark that we did not intend to recommend that wheat should be planted either with an English dibble or a

Yankee hoe. We admit that either process would be to slow and too laborious. We remember of once meeting a bright English boy who had left his father's farm in Ohio, because, as he said, the old gentleman insisted on his performing the back-breaking operation of dibbling in each kernel of corn, while their Yankee neighbors over the fence practiced a much easier and more rapid process, and raised equally good crops.

But the next question, Is there any other mode of planting wheat that can be adopted by farmers of small means? cannot be disposed of in the same way. Except where the land is too rough, or too full of roots and stones, we believe there is another mode by which it may be accomplished, and that mode is by drilling. Machines are made and sold in this country, we understand, at prices ranging from sixty to three hundred dollars. Our idea of "planting wheat" is realized by the successful operation of these machines. With them the seed is placed in rows at such distances apart, and covered at such depth, as the operator desires. He can also regulate the distances between the plants in the rows. To some of these drills rollers may be attached, so that not only may the seed be planted and covered, but the land rolled at the same time. The plants when thus standing in straight rows may be cultivated by horse-power, with a suitable implement,—completing several rows at a time. The usual distance between the rows in drill-planting is from nine to twelve inches. But in all cases, we believe, an important saving of seed is gained by drilling over that of sowing by broadcast.

Our idea of the cultivation of crops has been that we should aim to get the largest amount of *grain*, not straw; but there may be something worth considering in our correspondent's suggestions on this point. He seems so thoroughly acquainted with the whole matter, that he may show us reasons why a certain amount of each, may be more profitable than a larger amount of one than of the other.

We shall be glad to hear from him again, not only on this point, but on the advantages and disadvantages of drill husbandry, which we understand is extensively practiced in his part of the old country.

—The Michigan Agricultural College graduated ten young men on the 10th of November.

For the New England Farmer.

MILK OR PUERPERAL FEVER.

Can you, or any of your readers, give me a name for a disease in cattle, which I will describe as well and briefly as possible. A friend of mine had a valuable cow that dropped her calf on the 14th of the present month, and, to use an expression common with farmers, "she did well," in every particular. She calved in the morning. At evening her calf was taken from the stable and tied on the barn floor, the cow being tied up in her usual place.

The morning following, she could not get up, even with help, and *never* got up again. Several so-called cattle doctors saw her, and they varied considerably in their opinions regarding the disease. One said milk fever, another internal hemorrhage, another stoppage, &c. The cow lingered till this morning, when, seeing no hope of recovery, she was killed and opened. Found the liver of unusual size, and the gall four times as large as it should be; the liver was darker colored than usual, and was brittle or rotten, that is, you could easily break or crack it between your thumb and finger. The manifold (I think they call it) was full and hard to the touch.

On cutting it open, found it full, and the contents perfectly *dry*, hard and on the outer edges a slight scale or crusting that was black. The lungs I did not see, but they said they did not look badly.

The cow's food for six months past has been one quart of corn meal per day, and grass from the pasture. She did not seem to be in any pain at the first, but in thirty-six hours, perhaps, was in a good deal of pain, groaning with every breath. She did not want to lie with her head straight or natural, but inclined it backward and would turn her head over so as to rest in on both horns, with her nose in the air. She swelled some, though not very much, and was entirely blind a great portion of the time. Her body did not feel as warm to the touch as when in health, and would perspire freely when covered with a blanket, or when any warm drinks were given. Should be glad to hear from some one posted in such matters. I will add that her flow of milk did not cease any more than it would have done in ordinary sickness. SENEX.

Cumberland, R. I., Nov. 1, 1869.

REMARKS.—We think the disease was what is called among farmers, *milk fever*,—more properly, puerperal fever, or inflammation of the womb, attended with fever. The secretions of the intestines ceased, and the contents of the manifold became dry in consequence; the liver became gorged with blood, and its texture softened. Such cases are usually

fatal. We should have been pleased if you had described the condition of the womb.

AN EXPERIENCE WITH WHITE-WEED.

In 1863 I ploughed four acres of land, which produced only a light crop of grass, and was too low to plant, intending to dress and seed down immediately. The fall was wet, and it was found impossible to get on the manure; succeeded in harrowing tolerably well; sowed a part of the seed that season, the remainder the spring following. The first year it was not worth mowing. The first day of June, 1865, noticing that the land looked very green, I went to it; you may judge my surprise and indignation to find the land occupied with white-weed. We had never had it upon the farm before; when it blossomed, it was no wonder that the attention of the passers-by was attracted to it. I have seen many fields of white-weed, but none equal to this; it stood three feet in height. When in bloom, the whole surface was covered with flowers. It would have been difficult to have found a square yard upon the whole piece that had not a bunch of roots a foot across; oftener two or three such would be found. I resolved to be rid of it, although many told me it could not be done.

We cut the crop in June, while in blossom, before the seeds were ripened sufficiently to germinate; we got a fair crop, the majority of which was white-weed. We ploughed the field as soon as we could after haying. The season favored us; the summer and fall were hot and dry, the succeeding winter cold—little snow, with sudden changes. In the spring we harrowed the surface thoroughly, which was continued at intervals of a few days until August, digging up all that showed itself. When we seeded down, we gave the land a good dressing of leached ashes. This was followed by a good catch and a heavy crop of grass.

The next season our enemy appeared in force. I purchased refuse salt, applying a handful to the roots wherever it made its appearance; broke off the flowers that there might be no mistake when we had been over the entire field. This was continued as long as any blossoms appeared. Three days after the application, nothing could be found excepting the place where it "recently was;" the stalks, roots and everything were burned over a space as large as a man's hand.

The second year but little could be seen, but which I treated in the same manner. This year a few heads appeared, which yielded to the salt. To all appearance we are rid of the pest, which has yielded only to determined and continued labor. Without the aid of salt, it would have been a more difficult task. (I would add that the Turk's Island salt was the best.)

Messrs. Editors, what is a suitable punishment for a scoundrel who will raise and put upon the market such seed as this, for it was obtained in a sack of red-top? For the sake of putting about a couple of dollars in this man's pocket, I am put to more than a hundred dollars expense. The State prison is the only place for such fellows, where their labor would be applied to the benefit of the State.

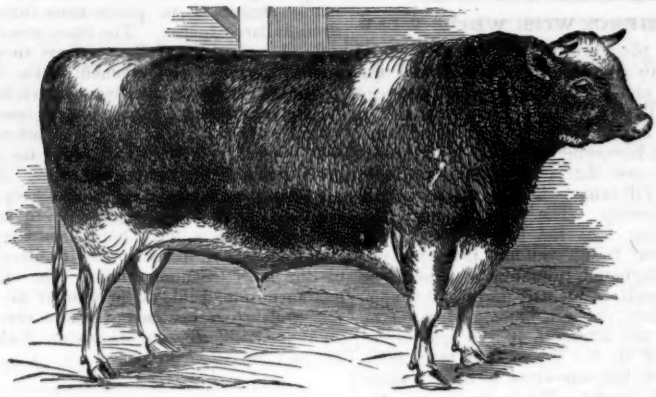
Since then I have closely examined the seed before purchasing; fifty cents or one dollar a bushel has not been any object when clean seed could be had. In this way the experience has not been wholly valueless. An old gentleman in this vicinity used to keep white-weed and other foul seeds, liable to come in grass seed, in a box; before purchasing he would look at it, and was able to detect any of the more common kinds. The clean appearance of his fields at the time of his death, was conclusive evidence that the plan was a good one.—*W. Brown, Hampton Falls, N. H., in Country Gentleman.*

How to Clean Old and Musty Barrels.—At this season of the year the farmer and beef and pork packers are often greatly troubled with musty, filthy smelling barrels, bottles, &c. How to cleanse them for use is an important question, which chemistry will answer satisfactorily.

Permanganate of potassa will entirely destroy all fungoid growths and fermenting matter, and render the barrel or bottle perfectly sweet and clean.

A pint of the permanganate is a sufficient quantity for a cider or beer barrel. It must be thoroughly rinsed so as to touch all parts of the barrel. Its deodorizing and disinfecting qualities are wonderful, as it contains five equivalents of oxygen, and will even deodorize carbolic acid and remove its pungent smell from the hands immediately.—*Hearth and Home.*

Soda Ash for Wire Worms.—A letter quoted in "Milburn's "Pests of the Farm" states: "I had sown a headland with soda ash, as a fertilizer; the following spring it was under turnips, and a man hoeing asked if 'anything had been done to the headland?' I asked 'why?' he said, "there was not a plant destroyed by the wire worm, and the rest of the field had fifteen to a nest.' I then determined to try it upon another field which was full of wire worms. I have never seen one on it. In the following year I had twenty-five acres of oats attacked more generally. I happened to have a cask of soda ash with me, and ordered it to be sown. From that day the ravages ceased, and within a week the whole field changed its color to a vivid green. I have always a cask by me, ready, in case of any appearance of the wire worm. The remedy is equally efficacious in repelling the attacks of the green-fly."



DUTCH CATTLE---BULL VAN TROMP.

I wish to inquire of you or some one that has raised the Dutch cattle, how they will compare with other imported breeds for the dairy, or beef, and for working oxen. Are they a tough, hardy race of cattle for our hard winters, and rough farms? How large are they? Some time ago you gave a description of a herd of them, but the paper has got mislaid so I cannot refer to it. Do they command such high prices as some of the other imported breeds? C. F. L.

Woodstock, Vt., Nov. 10, 1869.

REMARKS.—The monthly edition in book form of the FARMER is well calculated to obviate the difficulty of reference experienced in the use of a weekly newspaper. In the volume for 1868, several articles on this breed of cattle were published, which may readily be referred to by the index which accompanies the volume, and to some of these you probably refer.

The cattle of Holland have long been celebrated for their size and excellence. A French historian who wrote in 1350, said that Holland had been famous for its dairy products for five hundred years. In his history of the United Netherlands, Mr. Motley says, in speaking of Holland, "on that scrap of solid ground, rescued by human energy from the ocean, were the most fertile pastures in the world. An ox often weighed more than two thousand pounds." Mr. Chas. L. Flint, who visited the great international exhibition at Hamburg in 1863, speaks of the Dutch cattle as a prominent and marked feature of the show, and says they are renowned for their dairy qualities. Some writers believe that the Dutch cattle were the foundation of the improved breeds of England.

The Dutch cattle, however, are comparatively new in this country, and time must decide the question of their adaptation to our climate and to our soil, which is certainly very different from that of the section spoken of by Mr. Motley.

The breeders and friends of this stock are quite enthusiastic and hopeful. They might probably answer your questions somewhat differently from what those would who have invested their money in other improved breeds.

Mr. Allen says, in his book on American Cattle, that Mr. Chenery's herd, mostly imported in 1861, is "the only *herd* of pure bred Holstein or Dutch cattle known in the country, except their descendants, which may be in some other hands."

As to the dairy qualities of the Dutch cattle, Mr. Allen says they have been long bred and cultivated with a view to develop their lacteal production to the utmost, and that they are quick feeders and physiologically constituted to turn their food readily to milk, must be evident. Messrs. W. E. & B. Simpson, of Cambridgeport, Mass., state that a grade Dutch cow owned by them, gave 6390 wine quarts in a year, her largest yield being thirty quarts in one day, and averaging thirty quarts for about three months.

As a beef animal, Mr. Allen says, they have been, as yet, but partially tried in the half

breeds, or grades from the Holstein bull, on the natives or other cows of different breeds. So far, however, they are claimed to be satisfactory.

As working oxen he believes they will rank with other heavy cattle,—better in their grades with the lighter and more active breeds than in the thoroughbreds, as with the short-horn crosses. Mr. T. S. Lang, of Maine, says that when in Belgium he questioned the herdsmen in two or three estates that he visited, and they assured him that they excelled in this particular; one of them pointing to the intelligent head and eye, and strong, straight, active limbs, saying, do you doubt it?

The animal represented by the above engraving was imported by Mr. Chenery in the womb of his famous cow Texelaar, which has produced 76 pounds 5 ounces of milk in one day—over 35 quarts—and an average of 63¾ pounds per day for 63 successive days. At three years old Van Tromp weighed 2080 pounds; at four years old, 2310; at five years old, 2600; and at six years old 2720 pounds. He was calved March 20, 1862.

HUSK BEDS.

There is nothing equal to corn husks for under beds; yet few families have them even in the country, where the trouble and cost of them are so small. They are always light and easy, and last for a long time. Our family use no others. For twenty years they have done constant service, and are now as good as new; so that though costing at first about two or three times as much as straw, they are vastly cheaper in the end, besides being a thousand times better. Now is the time, and this is the way to get them:—

As soon as the husks are taken from the corn, before any mould or other harm comes to them, take the fairest and best of the leaves, free from all stalks, silk, &c., and spread them out to dry in some large, airy room, stirring them well every fair day for a month, or till they are perfectly dry. As they shrink 50 per cent. in drying it will take twice the bulk of straw to make a good bed. For people who raise them, they are easily got and prepared; for it is a nice little work for children. For people who haven't them, this is the way: Give some farmer lads—who want, and ought to have, some way to earn a little for themselves—give them a dollar and two bed sacks, to be crowded full in the green state of the pure husks, as just described; dry them as before named. This will make one bed. As there is some wear out to them, as to everything, once in half a dozen years a little new will want to be added. Don't split the leaves; they do not become flat and solid, as many suppose, but curl up and make the mass light.

Husk beds have a great medical value. In many cases of injuries and of diseases a hard bed is vastly superior to feathers; and as comparatively few families have mattresses, a bed every way as good as these may be quickly made for the occasion by putting the feather bed at the bottom, the husk bed above, and a comforter and other thick quilt over this. As a great remedial agent, then, every family should have one husk bed, and one is sure to bring all the others.—*Belfast, Me., Journal.*

VIGOROUS PLANTS EXEMPT FROM INSECTS.

We have often thought if all the conditions were present to give vigorous growth and health to a plant, that such plant would either not be preyed upon at all by insects injurious to vegetation, or, if they were preyed upon, the plant would be able to resist the attacks made upon it; and that the depredations of insects are only nature's gentle reminders that something is lacking which the plant needs. In the animal kingdom do we not find lice, ticks, &c., preying upon the unthrifty, while those in a thriving and growing condition are exempt?

A Southern planter, writing to the agricultural department of the Mobile *Register*, and giving details of the almost total destruction of his cotton crop by the boll-worm and caterpillar, closes his article with the following suggestive postscript:—

A corner of the farm, about one-eighth of an acre, was so poor, though guano had been applied, that I replanted it as late as the 24th of June, before I could get a stand, and it continued so stunted and sorry looking that, about the middle of August, I applied half a spadeful of fresh cow dung to each stalk, covering with a little earth. Having a good season from thence, the cotton grew off magically, commenced fruiting at once, is now weighed down with bolls, and, strange to tell, not a leaf has been touched by the caterpillar, though they devoured the other to the very rows so treated. Nor has the boll-worm disturbed it. I applied fresh stable manure to another poor spot, with like result as to worms, but not as to growth, for the plants *fired* from the caustic properties of the manure. They fruited extremely well, nevertheless.—*Cincinnati Gazette.*

Dry Earth for Poultry Houses.—The employment of dry, pulverized earth as the means of deodorizing poultry houses, appears to be worthy of more attention than it has hitherto received. The fact that from four hundred to five hundred fowls can, by this aid, be kept in one building for months to-

gether, with less smell than is to be found in any ordinary fowl house capable of accommodating a dozen chickens, is very conclusive as to its efficacy. In the building of the National Company, where this fact has been ascertained, seven or eight fowls are kept in each compartment, twelve feet by three, and yet there is no smell or trace of moisture. Mr. Greyelin informs us that if a much larger number are put into each run, the ground becomes moist, ceases to deodorize, and the birds at once become unhealthy. It should be stated that the droppings that fall from the perches during the night are removed from the runs each morning, and the dry earth only receives the manure that falls during the day; this has its moisture absorbed so speedily by the earth that it at once became pulverized, mixed with the soil, and ceases to smell. So powerful is the deodorizing effect of the earth that it does not require to be renewed in the runs for many weeks together.—*London Field.*

For the New England Farmer.

PREPARE FOR WINTER!

Winter is close upon us! The air is filled with snowflakes, the last flock of wild geese have left us for the great savannahs of the Mississippi; the small rivers and creeks have frozen over and thawed out the requisite number of times. Now the ice grows thicker every day, and soon the deep snow will blot out all the landmarks, and we can only trace the windings of the brook by its hedge of alders and hazels. Are we ready for it? That is the question each farmer should ask himself. If you are not, begin to-day to prepare for the winter winds. Nail on every loose board in barn, stable, and cow-stalls, remembering the old proverb that "a stitch in time saves nine."

Protect the young apple, pear, peach, and cherry trees against the ravages of mice. Scatter sulphur and copperas mixed in equal parts, all round the roots of the trees. This mixture is abhorrent to all vermin and they will keep their distance. Earth heaped up a foot around the trunks of young trees, and pressed firmly down will also prevent the attacks of the mice.

Lay down all the raspberry bushes, and grape vines, and cover with hemlock boughs; if these cannot be procured, straw can be scattered over them, or leaves, and secured with boards. The care you now take will be returned to you in full measure by the great increase of fruit in the ensuing summer. Prepare warm stables and sheds for horses, cattle and swine; it will take much less fodder if they are protected from the intense severity of our winters. A farmer who built a barn as tightly shingled and clap-boarded as his house, assured us that the outlay was soon restored to him in the well-being of his stock, and the decrease of the food consumed. It would seem as if all our farmers knew this fact, yet the wretched huts called barns, which are scattered throughout New England, show that they have not yet learned the needed lesson. Sheep are better able to withstand the cold, but they need a dry fold well sheltered from the wintry storms; and then are forced to huddle close together to keep each other warm.

The hens must have their house attended to, or they will not permit your income to exceed your outlay. There is great economy in all these matters, yet how many of us are "*penny wise and pound foolish.*"

There is yet time to draw in loads of dry muck to be used for litter, and to fill up the wet places in the barnyard. All this work will give you ample returns at the next harvest. Is your wood all under cover, and nicely chopped and sawed, ready for the housewife? If not, lose not a day, in storing, it if you desire your breakfast, dinner and supper *on time.* It is said that "wet wood makes the house too hot for men folks," and we endorse the saying.

As you gaze upon your well stocked barns, your fine cattle, hogs, &c., and your cellars, filled with the fruits of the harvest, remember the parable of the "rich man," who said to his soul, "Soul, thou hast much goods laid up for many years; take thine ease, eat, drink, and be merry." But God said unto him, "Thou fool, this night thy soul shall be required of thee; then whose shall those things be which thou hast provided?"—and share of thy abundance with those who have not been so blest. Among your investments *be sure* to take a little stock in the "Kingdom of Heaven," whose notes are always above par.

Bath, N H., Nov, 1869. S. O. J.

HOW TO BUILD A CISTERN.—I see that a subscriber wishes to know the best way to build a cistern. I have had the care of building quite a number, and would say to him, build two instead of one so large; dig the holes and put on two good coats of cement on the bank, and arch with good hard brick. One of my neighbors has one that I built for him sixteen years ago, in this way, and it has been in use ever since. I had one built for myself, six years ago; the mason put brick all round; the brick settled and it leaked. I had another built two years ago, which was eight feet across in the clear after finished, nine feet deep. This was plastered on the bank and arched with brick and has been full of water ever since, and has not leaked a drop that I know of. I could mention more made in this way but this is enough. I would not have brick or stone in the sides of a cistern if they were put in for nothing; they are simply thrown away.—*Mentor, in Country Gentleman.*

—It is predicted that Florida will become one of the largest sugar-producing localities on this continent. The character and soil are admirably adapted to its culture, and the crop is a sure one.

IMPORTATION OF WOOL.

EDITOR OF NEW ENGLAND FARMER:—In the address delivered at the American Institute, New York, by Mr. Bigelow, President of the National Association of Wool Manufacturers, I notice that, as published in the newspapers, he assumed that "the great cause of the present depression is excessive home production," and futhermore that he said, "our wool industry being depressed by over production, its restoration to the normal relations of demand and supply can alone bring relief." With this view of the subject I am unable to account for the marked increase in the importation of foreign wool, in addition to our "excessive home production," which is shown by the statistics of the foreign trade published by our government at Washington. By these it appears that, for the years ending with June, the

	No of Pounds.	Value.
Importations in 1868 were	24,124 803	$3 792 656.
Importations in 1869 were	39,607,975	5,597,641.
An increase this year of	15,483,172	$1,804,985.

This has a bad look to some of us wool-growers who have been waiting as patiently as we know how for the good time that you have encouraged us to hope was coming. J. B.

Benson, Vt., Nov. 9, 1869.

Having but little knowledge of the statistics of trade and commerce, we submitted the substance of our correspondent's inquiry to John L. Hayes, Esq., the able Secretary of the Wool Manufacturers' Association, who has kindly furnished the following reply, which we hope will be satisfactory to him and to others who may be alarmed by the published statements of the increase in the amount of wool imported by our manufacturers.

EDITOR OF NEW ENGLAND FARMER:—

Dear Sir,—I reply with pleasure to the interrogatories proposed in your favor of the 15th instant.

The facts stated are, that the importations of wool into the United States, for the year 1868, amounted in value to $3,792,065, and in pounds to 24,124,803, and in 1869, to to $5,597,641 in value, and 39,607,975 in pounds. These facts are understood to be stated by the opponents of the present wool and woollen tariff as proofs of the inefficiency of this tariff for the protection of the American wool grower. I do not propose to enter into an inquiry as to the correctness of the precise figures stated, for I admit the fact that the nominal importations of wool for the year 1869 considerably exceeded those for 1868. I will take some figures for illustration, whose accuracy I can rely upon.

Mr. George Wm. Bond, in his published price current of wool at Boston, for November, 1869, gives the imports into Boston for the first three-quarters of the years 1868 and 1869. They are as follows:—

	1868.	1869.
England,	359,[illegible]79 lbs.	2,710,761 lbs.
Buenos Ayres,	2,23[illegible]907 "	4,0[illegible]6,948 "
Cape of Good Hope,	8[illegible]8,751 "	1,648,[illegible]18 "
France,	49,335 "	686,833 "
Turkey,	970,941 "	2,324,5[illegible]9 "
Chili and Peru,	2,057,443 "	1,[illegible]39,053 "
Sundries	514,3[illegible]9 "	653,092 "
	7,0[illegible]0,855 lbs.	14,627,743 lbs.

The explanation of this great apparent increase is very simple and familiar to all persons in the trade. The importations were principally made directly by manufacturers. The character of the navigation was such in the latter part of 1868, and the first part of 1869, that the imports, which in the ordinary course of trade, should have reached Boston in 1868 arrived in 1869. Almost the whole imports of the Pacific Mills and the Atlantic Delaine Company, among the largest consumers of wool of all our mills, which should have come in 1868, are included in 1869. To this, the principal cause of the increase of importations in 1869, should be added an increased importation of combing wools from England, notwithstanding the high duty, and the needed encouragement thus given to the production of similar wools here; this increased demand for combing wools, resulting from the progress of the worsted manufacture in this country. Nearly a million pounds of the card wool included in the imports of 1869 were re-exported to Canada.

It is apparent, then, that the alleged facts fail to prove anything as to the inefficiency of the present wool tariff as a protection to the wool grower.

On the other hand, there are striking facts which prove the efficiency of this tariff as protection to the great mass of American wool growers. The principal object of the wool tariff was to check the importation of clothing wools, such as were largely imported from Buenos Ayres and the Cape of Good Hope, and which came into competition with the fine clothing wools which are the principal product of the American sheep husbandry.

In 1866, before this tariff act was passed, the importations of wool into Boston, from

Buenos Ayres were 12,368,988 pounds, and from the Cape of Good Hope 2,868,753 pounds. The whole imports of wool into the United States from the two great competing countries in fine wool production in 1866 were 22,693 bales from Buenos Ayres and 14,067 bales from the Cape of Good Hope, as against the imports in 1868, after the wool tariff went into operation, of 4604 bales from Buenos Ayres, and 1986 bales from the Cape of Good Hope.*

Such facts are conclusive that the wool tariff has effected precisely what it was intended to do. It has saved the fine wool husbandry of the United States not from depression, the result of over production in the Southern hemisphere, but from annihilation. To quote the capital illustration of Dr. Randall, "There is but a plank on the ocean between the United States and the South American wool grower, and that plank will bear but one, the other must perish. Without the tariff, the South American grower would have all the plank, because he could entirely undersell us in our own markets, and he raises more than enough fine wool to glut our market. The tariff gives us the plank. * * * * It is our market we are contending for,—our plank which they (the foreign wool growers) are trying to throw us off from."

Respectfully your obedient servant,

JOHN L. HAYES, Secretary.

Boston, Mass., Nov. 22, 1869.

YOUNG MEN AT FARMERS' MEETINGS.

A new feature in the attendance on the late meetings of the Board of Agriculture at Orono and Bangor is noticed with much satisfaction by the editor of the *Maine Farmer*. Alluding to the presence of the young men from the college, and the part they took in the exercises, he says:—

> Such a sight has never before been witnessed at any session of the Board we have attended during the past ten or a dozen years. Surely, the world *does* move; light *is* breaking; the young men of our State begin to realize that knowledge is a power, and a power, which, applied to agricultural operations by a skilful hand will bring results as satisfactory as if applied in any other direction whatever.
>
> If any one who has attended the meetings of the Board of Agriculture for the past ten years, will call to mind the sessions that have been held during that time, and the general "make-up"—so to speak—of those who have attended them, the fact will force itself upon him that there were no young men present. This, at any rate, is the light in which the matter strikes us at present. Those composing the assemblage on these occasions have been men somewhat advanced in years; to young men it would seem the meetings possessed no attractions. But the recent session of the Board of Agriculture at Bangor, stands out in striking contrast to all that have heretofore been held, in this particular, at least; and if in no other respect the Bangor meeting deserves to be reckoned one of the most successful the Board has ever held.

We doubt whether the Agricultural Boards of the other New England States have hitherto been more successful than that of Maine in securing the attendance and co-operation of young men and boys at their respective sessions; nor have we any doubt that all of them would be equally well pleased by a similar attendance. How then can it be secured? How was it secured at the late meeting of the State Board of Maine?

The young men who were thus interested in the sessions of that Board were present not as mere spectators, but as actors. A part was assigned them in the programme of the proceedings. They had something to do, something to say, and a set time to do it and to say it. They were expected by others to perform a part—to participate in the proceedings—they expected to do so themselves, and when their turn came, they did it. Can any one who understands human nature be surprised that these young men "manifested,"—as the *Maine Farmer* says they did,—"a close, earnest and intelligent interest in the proceedings?"

We do not say that this is the only cause of the change on which our Maine friends are congratulating themselves. But it is undoubtedly one reason, and it is the first that occurs to our mind. Our school-masters tell us that the very word *education*, implies a leading out, not a mere cramming, of the mind; and in view of the success of the Maine Board in leading out the minds of their young friends we are disposed to adopt the exclamation of brother Boardman, with a slight variation, and say,—Surely, the world *does* move; light *is* breaking; our Agricultural Boards begin to realize that if they would interest young men and boys in their work they must devise some means by which these young men and boys shall take some part in that work.

The practical farmer, mechanic or artist who should seat his apprentice in an arm-chair and expect proficiency from ever so much

*Mr. James Lynch's Statistics, Bulletin of the National Association of Wool Manufacturers, Vol. I, page 84.

talk or lecturing would be an exception to the general practice. In each of these, and all other similar professions, it is customary to put the proper tools of the craft into the learner's hands, and to set him at work. He may be bungling and awkward at first,—he may even spoil the tools and the stock put into his hands,—but experience in these industries has demonstrated that such a course is the only practicable way to secure proficiency or to excite an interest in the business on the part of the learner.

Perhaps almost every one will say, "all this is well enough and proper enough in the field or in the shop, where two classes, men and boys or journeymen and apprentices, are recognized and provided for, but what has it to do with our State Boards of Agriculture, or with the formal meetings of farmers? The idea of inducing ordinary farmers' boys to take part in exercises conducted by men distinguished for learning and eloquence,—by Governors, Congressmen, Professors in colleges, &c.,—is simply impracticable."

Perhaps so. But is that the plan we are recommending? Is it the plan that was adopted by the Maine Board of Agriculture? Did these boys make a speech or read an essay? We believe they did nothing of the kind. They merely recited their ordinary school lessons. And yet this simple exercise elevated them to the dignity and the interest of actors, or participators, in the proceedings of the day, and gave the old heads more pleasure than any of their own performances.

It is evident, then, that the managers of these assemblages desire the attendance of the young men and boys. With their "old men for counsel," they need "the young men for war," and deeply regret their absence. On the other hand we believe the young men really desire to attend, and that they would be greatly benefited by an attendance under such circumstances as would make them feel that they were at home, and in their place. Why then may not the desire of both be gratified? Why may not these two classes be brought together? "Where there's a will," says the old adage, "there's a way." Who will point out this way?

—An unmarried woman at Virden, Ill., owns seven hundred acres of excellent land which she paid for by teaching school.

CARDING THE WINTER STOCK.

Every person who has long been confined by sickness, or by a broken limb, can well appreciate how grateful any gentle motion is, that makes the surface all aglow and sends the blood dancing through the veins. They feel younger at once; a new elasticity of muscle and limb is imparted to them, and with that a buoyancy of mind which brings body and soul into pleasant harmony.

John Hunter, the most celebrated physician, probably, for many ages, when he told mothers of the three cardinal things to be done for infants, viz.: "plenty of milk, plenty of sleep, and plenty of flannel," did not fail to add, also, plenty of gentle friction. When his three things have been supplied, nothing is obviously more grateful to the child than to have the body gently exercised by friction.

Our neat stock, in their winter quarters, are helpless in this respect. They are tied by the neck to a spot three by four feet, where they are doomed to remain most of the time for months in succession. They are provided with a rasp on the tongue, which is intended to subserve two or three purposes, one of which is *scratching* themselves, when inclined to do so. But in their confined position, they are deprived of this luxury, during a large portion of the time. How grateful the privilege of licking is, is evident from the constant application of this *rasp* to their sides and limbs, during the time they are at liberty, daily, in the yard.

Use the card, then, at least once each day, on every animal in your care, while confined in its winter quarters. Use it gently, because a rough usage excoriates the skin and tortures the beast. Use it generously, not in a hasty and grudging manner, because it not only affords comfort to the cattle, but tends to *fill your own purse!*

Carding tends to make beef, because it keeps the skin soft, loose and lively, and no animal can fatten readily unless these conditions exist.

Carding increases the flow of milk, because when the skin is healthy and active, the processes of digestion are quicker and more perfect.

Carding saves feed, because the better the digestion is, the more nutrition is extracted from the food eaten, so that the time spent in carding is spent economically.

Carding improves the appearance of animals, so that in buying, a good judge will pay from five to ten per cent. more for animals whose skin is soft and loose, that gives more milk, and that look as though they got all the goodness out of the food they eat, than for those not possessing these qualities.

Carding, then, makes cattle fatten faster, increases the flow of milk, saves fodder, makes them handsome, and thus puts money into the pocket of the owner.

VERMONT DAIRYMEN'S ASSOCIATION

The Vermont *Watchman and State Journal* publishes a communication from O. S. Bliss, Secretary of the Association, in explanation of the objects and principles of the organization. He says:—

It is demonstrable that Vermont dairy products, though bearing a *good* general reputation, are not as a whole strictly first-class, and do not return to the citizens of the State so much money, by many thousand dollars per annum, as they ought; that the product per cow is not so large as it might and ought to be; that the number of cows kept, as compared with the number of acres of tillage lands, is much too small; that the prevailing system of marketing the product is radically faulty, in that there is not a proper discrimination between the several grades, and the better are made to compensate for the loss to the middle men on the poorer, which inevitably results from the system; that the supply of labor, specially of female labor, is inadequate to the wants of the State, imperiling the dairy interest of many towns, and that these and many other defects and evils of our system may be remedied by a proper diffusion of information among the people.

To investigate all these defects and evils, and propose practicable remedies, is the office of the Dairyman's Association. The manner in which it proposes to accomplish these purposes is to invite addresses from practical men who have investigated and experimented upon the several subjects until they have established certain facts and principles; to cause inquiries and investigations to be made and reported by committees appointed from among the members of the Association, and to compare experiences and elicit facts by discussions.

For these discussions and addresses the constitution provides for a three days' meeting each year, and for a printed report of the proceedings, which will be furnished to each member, so that the members who are unable to attend will be informed of all that is said and done at these annual meetings, which it is believed will be a full consideration for the two dollars invested in membership.

Sale of Cotswold Sheep.—Burdett Loomis of Windsor Locks, Conn., has sold to J. & S. S. Walker of Hartland, Vt., two Cotswold bucks and one ewe.

AGRICULTURAL ITEMS.

—In exporting living plants, the Japanese wrap the roots in a mixture of earth and carrots ground together.

—The Byfield, Mass., Cheese Factory has closed operations for the season. The company has made nine tons of cheese the past season, and declared a dividend of 8 per cent.

—During the first nine months of the present year there were exported from the port of New York 13,511,916 bushels of wheat; 1,572,706 bushels of corn, and 1,081,226 barrels of wheat flour.

—High prices for hops are quoted in Europe, and it is the opinion of many that there is a fair prospect of a further advance in the price in this country.

—The receipts of the three principal agricultural fairs in eastern Pennsylvania last fall were as follows: Doylestown, $3,500; Allentown, $6,930; Reading, $6,295 55.

—A Vergennes, Vt., cheese dealer has purchased the entire lot of cheese manufactured on the farm of Ezra Meech, of Shelburne, since June 1st, for which he paid $800—being 16 cents per pound.

—Owing to the extensive destruction of trees in Victoria, the climate is changing. Near Ballarat the rain-fall is sensibly diminished, and the Government is taking measures to prevent the waste of timber and to establish nurseries of forest trees.

—The *Maine Farmer* makes the following estimate of the crops of that State for the past season: hay, 800,000 tons, (equal in quality to 1,000,000 tons produced in 1868;) corn, 900,000 bushels; potatoes, 4,000,000 bushels; wheat, 200,000 bushels; barley, 800,000 bushels; oats, 2,00,000 bushels.

—In a forest tree lately cut down in Wisconsin was found an Indian arrow-head, completely embedded and grown over. It appears, from counting the layers of wood over it, that ninety years have elapsed since the arrow which it tipped was shot at the tree.

—In Joint Assembly of Vermont last November the following gentlemen were elected Trustees of the University of Vermont and State Agricultural College for six years: Hon. Justin S. Morrill of Strafford, Rev. Horace Herrick of Wolcott, Hon. Samuel H. Stevens of Enosburgh.

—There are indications that Hereford cattle are rising in favor in England. After the show of the Herefordshire Agricultural Society, a large number of these cattle were sold. Three prize bulls sold for 363 guineas, one of them going at 190 guineas. From a single herd 30 cows and heifers brought an average of over 26 guineas.

—A California correspondent of the *Boston Journal*, who has eaten wheat bread at supper, the material for which was standing in the field at sunrise, says that when the grain is ripe it is often cut, threshed and put in the sacks the same day.

Instead of the reaper, the "header" is now generally used. It cuts the straw midway, and its swath has a width nearly double that of the reaper. With two headers and five wagons a large threshing machine is kept running, and in this way forty acres and 1,500 bushels of wheat are harvested in a single day.

—The N. H. *Statesman* says that a farmer from a neighboring town brought a quantity of cider into Concord, a few days since, and sold it for $7 a barrel. Twenty or thirty years ago the same man brought fifty barrels into town and sold it at 75 cents a barrel (total, $37.50,) receiving most of his pay in goods.

—The forests are dying out in certain parts of Virginia. The chestnut trees have already submitted to some deleterious agency, and their growth is nearly exhausted, and this year the oak, and in fact all the trees of the forest in certain sections, are dying. No explanation of this disastrous visitation has yet been given.

—A hand potato digger was exhibited at the New York State Fair. It is simply a wide fork with six or seven teeth, with a movable fulcrum behind. The fork is thrust into the soil on one side of the hill, and by bearing down on the handles the potatoes are lifted up, and the fork is shaken up and down on this fulcrum to separate them.

—Western papers and farmers' Clubs are discussing with much spirit the expediency of a law to prevent cattle from running at large. The expense of fencing against his neighbor's unruly cattle, and the loss of crops occasioned by them, are serious matters with the new settler; but, on the other hand, the advantages of free pasturage are also of considerable importance to him.

—A Kansas correspondent of the *Rural World* writes:—I will give you an infallible remedy for galls and sores of all kinds on horses, including what is generally called scratches: Two ounces extract of lead, two ounces spirits of wine, one ounce sal ammoniac, half ounce white vitriol, four ounces soft water; mix, dissolve, and wash three or four times a day.

—The trade in bones is becoming an item in the business of Jackson, Tennessee, giving employment to many poor people that would otherwise be without anything to do. All the bones that have accumulated for years in the neighborhood of the city are collected and shipped to Atlanta, Georgia, at which place there is a company engaged in making chemical manures.

—A correspondent of the *Maine Farmer*, at Welchville, says, last Spring I purchased a bushel each of the Early Sebec, Early Goodrich, Harrison, Gleason, Orono and Crown Eagle. They were all treated alike in planting; were planted on sandy loam, and the first four varieties named amounted to just nothing. The Orono produced fifteen bushels of merchantable potatoes; the Crown Eagle twenty. I also planted one-third of an acre with the Garnet Chilli, and received ninety bushels of good sound potatoes. Unlike the above named varieties, these were planted on wet, clayey loam, but otherwise received the same treatment.

—Steam engines are used in New York, and in many of the Western States, for threshing grain. Five to six hundred bushels of wheat, and 800 to 1000 of oats are a common day's work. An engine costs about $1000, and can be moved from place to place by a single pair of oxen.

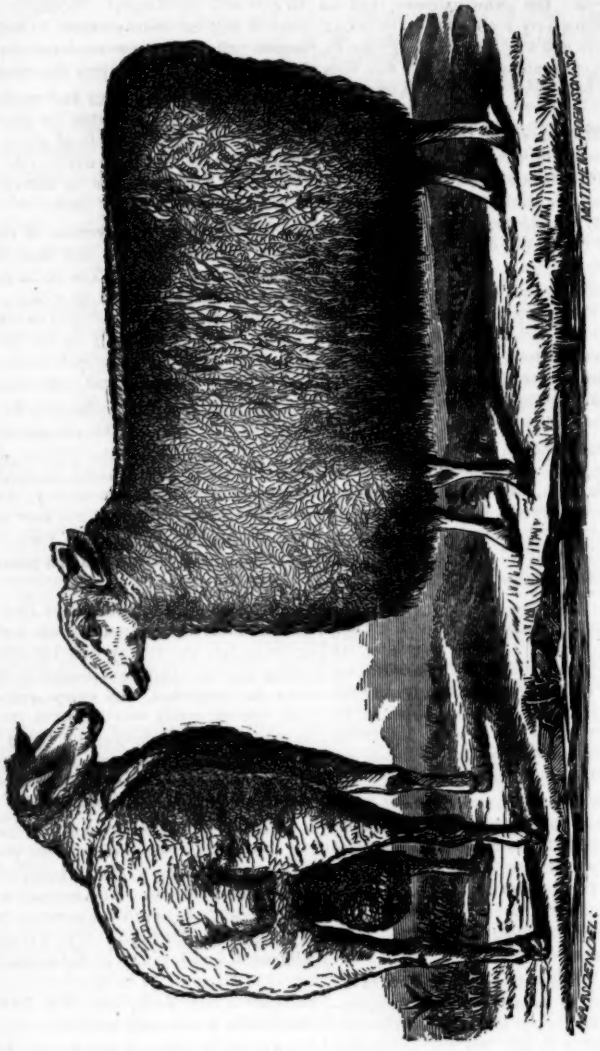
—An important improvement in the manufacture of horse collars has just been devised by a Philadelphia mechanic. The collar being stuffed with elastic cork, is light in weight, and adapts itself to the shape of the animal as readily as if it was moulded. It is highly elastic, does not chafe or gall the neck, and, the cork being a non-conductor, injury from the heat is prevented.

—The London Society for the Prevention of Cruelty to Animals is turning its attention to cases that are occurring in the country. Recently, a farmer holding five hundred acres of land was, on the complaint of the society, convicted of working "wounded horses," and sentenced to three month's imprisonment. The foreman was imprisoned for six weeks, and the ploughman was fined $3 and costs.

—President Welch writes to the *Iowa Homestead* that the Iowa Agricultural College buildings will accommodate the faculty and 150 students; that during the year there have been over 200 applications for admission, and every available room, with one exception was filled. A defect in the warming apparatus prevents holding a winter session now, (!) but after this year there will be a regular course of lectures every winter on the various subjects of farm industry.

—An attempt has been made this year, with a fair show of success, to enlarge the production of barley in this country, and to terminate the scandal of its importation. The increase is estimated by the *Prairie Farmer* at 14 per cent. in Indiana, 11 in Ohio, 9 in Michigan, 10 in Wisconsin, 26 in Minnesota, 7 in Iowa, 20 in Nebraska, 28 in Kansas, 22 in Missouri, 37 in Kentucky, 7 in Pennsylvania, 20 in New York, and 14 in New England. The quality is generally good.

—A correspondent of the *Boston Journal* says there is one singular thing about the grasses of the Pacific coast. When apparently dry and useless for food the cattle eat them greedily, and get fat on straw and stubble. The reason is they are rich in nutritious seeds, which last till late in the season. Sheep will be turned into a field with no sign of a blade of green grass, and pushing their noses down among the stubble, will eat the seeds which lay thick upon the ground. The wild oats grow on most of the hills of Central and Southern California, and are one of the best feeds for all kinds of live stock.



THE LINCOLN OR LINCOLNSHIRE SHEEP.

For lustrous combing wool, the sheep of England are undoubtedly superior to those of any other country, and at the present time, under the depressed condition of the fine wool business, many farmers are turning their attention to the larger breeds of sheep. We give an illustration above of one of the old English breeds which is less known in this country than the Leicesters and Cotswolds. Mr. Randall mentions only two importations in his book on Sheep Husbandry,—that of L. D. Cliff, of Carmel, Putnam County, N. Y., in 1835, and of Messrs. George H. Gossip & Brother, in 1836. He remarks that Mr. Cliff established a flock which was generally regarded as highly valuable. They were hardy, gross feeders, and very prolific. They yielded from six to ten pounds of wool per head. Mr.

Cliff sold a lot of half blood two-year old wethers in February 1839, which weighed 139 pounds to the carcass.

In the winter of 1867, Mr. Winthrop W. Chenery, Highland Stock Farm, Belmont, Mass., imported some of these sheep from Canwick, Lincolnshire County, England. In an article published in the MONTHLY FARMER for 1868, page 546, written by our correspondent "Mentor,"—a gentleman of great experience in the wool business,—the leading characteristics of the English lustre-wooled sheep are given. Speaking of the Lincoln or Lincolnshire sheep, he says they are larger framed animals, their fleeces are heavier and the staple longer than either the Leicester or the Cotswold. The wool measures from ten to eighteen inches in length, and the fleece weighs from eight to fourteen pounds. The sheep is hardy and prolific, but matures slowly, and as fourteen pounds of the best lustre wool cannot be grown on one sheep without good food and plenty of it, the Lincolns require a very rich pasture.

In the Agricultural Report of the Ohio Board of Agriculture for 1866, a long article on the various kinds of wool was published. It was a translation of a work by a Mr. Elsner, of Silesia. It is there stated that the best representation of nice combing wool is the Lincolnshire sheep, and it is one of the largest sheep in England The next in rank for combing wool is the Leicester, and the third is the Cotswold.

In an address before the Royal Agricultural Society, at Cirencester, Mr. J. A. Clark said, "Lincoln wool is in great request from its peculiar properties of length, strength and lustre."

The above cuts represent the Lincoln ram "Lord Canwick," and the Lincoln ewe, "Lady Bassingbourne," imported by Mr. Winthrop W. Chenery. The ram's fleece, which was sheared in 1868, of about sixteen months' growth, weighed twenty-three pounds. This animal has been lately sold to a gentleman in California, and we understand that Mr. Chenery has none of this breed for sale at present.

—Many of the most valuable islands off the Carolina coast will next season be devoted to the growth of the finer kinds of cotton. The planters expect to make more money to the acre than by continuing the growth of the Sea Island cotton.

EXTRACTS AND REPLIES.

COTSWOLD SHEEP.

A notice of some Cotswold sheep that I purchased of T. L. Hart of West Cornwall, Conn., was published in the FARMER. Perhaps some of your readers who are engaged in sheep raising will like to know how I like them. I have no hesitation in saying that they have far exceeded my expectations in all respects, and please me better than any other breed I ever raised. I have just weighed a twin ewe lamb from a grade ewe, sired by the buck lamb I had of Mr. Hart, that weighed 113 pounds, and the mate, which I sold two months ago, I am told will weigh more. My yearling ewe sheared 14 pounds of wool, and will weigh 175 pounds now, and has had no extra keeping.

Having been engaged in butchering and selling meat, I have found the Cotswold to dress heavier in proportion to the live weight of carcass than any kind of sheep that I have dressed, and are much fatter on the same keeping. If more of them could be had, it would be money in the butcher's pocket and gain to the consumer, while the farmer would receive a third more for his sheep. Thousands of the sheep now kept by farmers and sent to market are worth little more than the skins on their backs. While farmers are grumbling bitterly at the low price of mutton, consumers are complaining of its unprofitableness, even at prices so low that dealers are losing money on them, the best they can do. How can this be otherwise? What amount of meat is there on a quarter of mutton weighing from five to ten pounds? And the common sheep of New Hampshire will average little more. Common sense will teach a man the difference in profit to all concerned between a carcass of mutton that will weigh eighty to a hundred, and one that will weigh thirty to forty-five pounds. The consumer says to the butchers, give us better mutton and we will pay your price, but we don't want mere bones any way; and the butcher says to the farmers, give us mutton; we can't sell mere frames; and unless you furnish a better article the people will buy beef and pork, and the use of mutton will decrease. I would advise farmers whose flocks are run down and need improving, to try the Cotswolds this year, and next fall give me the result of the experiment. A. L. SANBORN.

New Hampton, N. H., Nov. 19, 1869.

TO PICKLE AND SMOKE BACON.

At this season of the year farmers are slaughtering their hogs, and are ready to make hams and bacon. All have not a smoke house, and are forced to depend upon their neighbors. It requires some skill and experience to smoke them just right. Our hams have been spoiled for our taste more than once—the smoky flavor being too intense. Now we have found a way which makes them *just right;* so of course we must impart it to others. First, we smoke the barrel or firkin, by placing it over a small fire of corn or the cobs which are put in an old tin pan. We have tried cobs, saw dust and maple chips, and think that burning corn and cob together gives the sweetest smoke. Four good sized ears of yellow corn will smoke a fifty pound firkin which will hold two large hams, two pieces of beef and two or three tongues. The meat is rubbed with two quarts of fine salt, one pint of molasses and three ounces of saltpetre, for three days before putting into the firkin; turning and rubbing it twice each day; but if this is too much trouble, a pickle can be made of six pounds of coarse salt, one quart of molasses, and three ounces of saltpetre, dissolved in two gallons of water, and after the meat is closely packed in the firkin this mixture is turned over it. In three or four

weeks the meat is ready for use; the beef can be hung to dry, and ham and tongues left under brine. When a ham is cut it can be returned to the pickle; thus it is kept from drying up and from insects. In March or April pour out the brine, re-smoke the tub, scald the brine; add one pint of salt to every two quarts of water which is needful to keep the meat covered; or else, pour away the old brine, (it is good for the asparagus bed or the plum trees) and make new Keep the firkin in a cool, dry cellar, or in the ice house, and your meat will be as sweet as a nut till it is all consumed. This way of smoking and pickling will recommend itself to every woman of common sense. If she is willing to take the trouble of rubbing the hams, the meat will be sweeter. After they have been well rubbed they should be placed in the smoked firkin and pounded down very tightly with a heavy stick. A large stone must be laid on top of the meat, and the salt, molasses, &c., poured over it. In the early spring a fresh brine can be made for the meat, washing off the old brine and re-smoking the firkin. Beef and pork can be cured together without injury to either. S. O. J.

Bath, N. H., Nov., 1869.

CATERPILLARS AND WILD CHERRY TREES.

MR. BROWN,—Dear Sir:—I am very much surprised to see in your paper advice to "cut down and cast into the fire" every wild cherry tree, as they are a complete nursery for caterpillars. The reason you give for destroying them is the very reason I should give for planting them. Nobody can suppose that they create caterpillars. They only attract them from every other tree, and are thus the best guard of the orchard that can be found. Let a few stand in or near the orchard, and there will be no necessity for cleaning every apple tree of nests of caterpillars. They will be all found on the cherry trees, which need not to be planted in the pasture; and, if the cherry trees are low, the labor in getting rid of all the caterpillars will be very small.

I read your paper pretty constantly, and my only objection to it is that there is so much good in it, that it takes up too much time. G. B. E.

Winthrop, Mass., 1869.

REMARKS.—We have great deference for the opinions of our correspondent, but a twenty years' experience proves that his plan has not operated well in our case. A stone wall separates a large orchard from a neighbor's field, where he allowed wild cherry trees to grow abundantly. They were covered with caterpillars every year, and the adjacent apple trees were about as lively with them as were the cherry trees. Tired of destroying them, we obtained consent to cut down the cherry trees, and the result has been, that it has not required half the labor to take care of the apple trees since. The best way, we think, is to destroy the *sources* of the evil.

OUR BOOTS AND SHOES.

The NEW ENGLAND FARMER comes to us weekly, laden with good things. It discourses of the past and the present, and with hope looks ahead toward the good time coming, when every farmer in the land shall get a living easy, and have plenty of time to wipe the sweat and dust from his face, and to sit down beneath his own vine and apple tree and enjoy the fruit of his labor, the society of his friends, and the beautiful things in creation around him. Moreover his happiness would be increased if the post-office department would be a little more prompt in the discharge of its duties. For a man to wait until Saturday night or the next week, for a newspaper due on Friday, is like having to wait for an opportunity to eat a cold dinner, which would have been much better warm.

But this trifling annoyance is not to be compared with the trials and sufferings endured by farmers, in common with other classes, on account of the present style of boots and shoes. I have heard of boys being "big enough to go barefoot;" but what is the exact size or age which entitles a boy to that peculiar honor I never yet have learned, but I have wished many a time that I could go barefoot *always*. I have lived on this earth upwards of forty years, and have had a new pair of shoes or boots every year, I think, but never since I can remember have I had a single pair that were comfortable and easy. I have not a club foot, nor a long heel, and there is nothing peculiar about my feet. The truth is, the present style is not adapted to the foot. Why not, is more than I can tell. Some infernal spirit must have had control of him who designed a pair of boots or shoes that compels the wearer to be constantly going down hill whenever he attempts to walk. Why should the heel be raised one or two inches higher than the front part of the foot? Why should the toes be squeezed at every step into an acute angle, with acute pain? I have questioned shoe manufacturers in regard to the matter, and they answer, "If we should make a shoe to fit the foot, no one would buy it." Then nobody prefers a blessing to a curse, when curses are most in fashion. In heathen lands little children are thrown to the crocodiles because it is the fashion, and in New England they are obliged to wear high heeled, narrow toed shoes because it is—*the fashion.*

Hebronville, Mass, 1869. L. L. READ.

BARREN APPLE TREES.

What shall I do with my apple trees? I purchased a farm in this town fifteen years ago. On a field descending south were many small apple trees. When mowing, we were careful to leave these trees, and there are now 300 of them on the field. They are from one to six inches through; mostly thrifty, and are considerably shading the land. I do not get ten bushels of apples a year from them. Shall I cut them down and put the land to a better use; or had I better graft them with scions from trees that bear? S. FISHER.

Ripton, Vt., 1869.

REMARKS.—The trees are now fifteen to eighteen years old, and if producing as they usually did thirty years ago, would yield, as an average, one barrel to each tree. It appears that the trees are in their *natural* state—are not grafted. They ought, therefore, to be hardy and productive. But they are not. If they will not bear in this condition, is it likely they would if grafted? We think not. The difficulty does not lie in the variety of the fruit, but in some wide spread influence that we know nothing about, except from what we see of its effects. It does not seem that the trees are deprived of any of their accustomed powers. Fruit buds set abundantly last year, and the trees blossomed, but bore no fruit. They have again set their buds for another year, and they appear fresh and strong. Their non-bearing is not on account of poverty of soil, for trees are all about us that have made a large growth the past season, but produces very little fruit. We know nothing

of the causes which have so cut off the apple crop in the New England States for several years past. The various families of the vegetable, like those of the animal kingdom, seem to be subject to occasional epidemic or general diseases, and we hope that, like the cholera, the present disease which afflicts fruit trees will be succeeded by a period of health and fruitfulness.

We will not advise to graft your trees, and we should reluctantly advise to remove them; if they are cumberers of the ground, and there is no hope of redeeming them, let them give place to things that will make a return.

NORWAY OATS, AND HOW HUMBUGS GROW.

I have read piece after piece about Norway oats, and am still an unbeliever in their boasted superiority. Passing by a field of the Norways this fall, I stopped and picked three or four of the largest heads I could find, and brought them home. On comparing them with the common oats, I found that they would not produce any more pounds to the acre, under like cultivation. The world is, always has been, and, for ought I know, always will be full of humbugs. In 1859 and 1860 the big English or Barley Oat was all the go. It soon disappeared. About 1861, the full blood Spanish Merino sheep fever appeared, and soon the country was so greasy that if the farmer on a hill wasn't calked up sharp he would find himself sliding to the bottom immediately. This raging fever prevailed until the manufacturers ascertained that with all their skill and chemicals they could not make cloth out of yolk or grease, and then the fever was broken or turned. The fact is, shaving machines are so plenty that farmers must "keep their eyes peeled," or they will be taken in.

While digging my potatoes this fall, which were manured in the hill, I found one stalk of India Wheat, of unusual size, growing from a potato hill. It was almost such a tree as the fowls of the air might lodge in the branches thereof. Not only the stalk but the grain was of an uncommon growth. The kernels were one-third larger than usual. Now, were I to sow this grain in a rich place next year, give each kernel plenty of room, employ some skilful writer to invent a high-sounding name for my new variety and to extol its wonderful qualities, and get the printers to keep it before the people, should I not follow generally the footsteps of my predecessors on the high-road to wealth and renown? And would my new Cochin-pootra wheat be a more transparent humbug than many others with which farmers are befooled?

Braintree, Vt., Nov. 1869. H. H. C.

RACCOONS AND HEDGEHOGS.—CROPS IN VERMONT.

Living on a hill farm which is nearly surrounded by woods, these animals have a good chance to prey upon my crops, and I have suffered much from their depredations. Sometimes they have mangled and destroyed one-fourth of my corn. With me the Hedgehog is as bad as the Raccoon, and together they occasionally make about as bad work in a field as a drove of hogs could. This year I planted a piece of corn by the side of the woods. Expecting trouble, I went into the field before the corn was fairly in the milk, and found they had already commenced their harvest in earnest. Though they had evidently spoken for the lion's share of this piece, I thought I would make one effort to save the crop. I tore six or eight newspapers into pieces, some eight or ten inches square, and cutting off a tassle, adjusted one piece of paper in each hill, about as far down as the first leaf, in the row next to the woods, and so far as I could see the corn was not meddled with by these animals afterwards. If it should prove equally efficacious in other cases, some of my brother farmers may thank me for writing out this little experiment.

As I have taken my pen in hand, I will just add that in this section, through the month of June and July, farmers did not expect to get a sound ear of corn. But now, as we have a fair crop, how thankful ought we to be to the Giver of all good for his blessing. Well may we say:—

"God moves in a mysterious way,
His wonders to perform;
He plants his footsteps in the sea,
And rides upon the storm."

Braintree, Vt., Nov. 10, 1869. H. H. C.

ABOUT WHITEWASHING.

I have been whitewashing quite extensively this fall, and have thought that my experience may be of some use to others. I think it a little strange that farmers do not use whitewash more than they do, as it costs but little, and most anybody can apply it. It makes buildings look better and last longer. I use nothing but lime and water. I have whitewashed most of my roofs. I have put it on in all kinds of weather. If applied when the roof was very dry, it did not stay on long after it rained; if just before a rain, and when the roof was a little wet, it did better; but if right after a rain, when the roof was quite wet it has withstood all of our late rains, and in good order. Of the roof of a long building which I whitewashed, a part was of very old, and a part was of nearly new shingles, and the whitewash has staid equally well on both. If I were ever to whitewash another roof I would put it on after a rain. C. P. L.

Woodstock, Vt., Nov. 10, 1869.

LAME CHICKENS.

In reply to your Haverhill subscriber's inquiry about his lame chickens, I will say that we have about fifty chickens of various sizes, five of which were taken lame. Losing the use of their legs, they were readily caught. I took them to my husband to be killed. He asked me to keep them by themselves and feed them well. I replied that all my hens were well fed, and I could not feed five any better than I fed the fifty. But I thought I would try them. The result is they are now fit for a Thanksgiving dinner. If they had been left with the other hens they would not have got well. Chickens, like everything else on the farm, must be taken care of. Mrs. E. M.

Rockport, Mass., Nov. 17, 1869.

SPENT LIME.

Will you inform me, at your convenience, through your columns, whether the spent lime from the tanner's pits, largely mixed with hair, would make a good top-dressing for grass lands?

Milford, N. H., 1869. Wm. P. Endicott.

Remarks.—It is often used with excellent results.

A BIT OF POULTRY EXPERIENCE.

The first of October, 1868, I commenced with four old hens and four pullets, a mixture of Brahma and Cochin China. The first of last June I sold two of them. They have laid 1087 eggs, and raised thirty-six chickens up to October 1, 1869. But within a short time five roosters, that would have dressed about twenty pounds have "come up missing." Orson Towne.

North Dana, Mass., Nov., 1869.

Ladies' Department.

From Once a Week.

THE INITIALS.

Yet stands the tree! There seems no change
Come o'er its mossy trunk or leaflets fair,
Sturdy its branches spread. To me, how strange
To see it there!

The years have passed, the happy hours have fled,
The burning love has now forever gone,
The bright hopes, like the fallen leaves, are dead—
I am alone!

And yet, upon that tree her much-loved name,
Unscathed by time, with mine is intertwined.
Can it be years since to this spot we came,
One heart, one mind?

Her arm was round me, her breath fanned my cheek.
As I the letters carved with no small art.
Together, ever! though we did not speak,
Was in each heart!

Then, once again, I will her name repeat,
And try forever to forget the words;
And pray that time, with gentle hand, may beat
O'er memory's chords.

I will just place my lips upon that tree,
And seal the feelings of the past forever,
And will depart. Where'er my path may be,
My heart is there.

And now I call, and fast my pulses beat;
A dainty sound the fallen leaves comes o'er—
Is it the brushing of her fairy feet?
Ah, nevermore!

Some other now with her elsewhere may trace.
In letters fading, their names to intertwine,
Which time may blot, but he dares not efface
Such love as mine!

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

[Entered according to Act of Congress, in the year 1866, by R. P. Eaton & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

CHAPTER XIX.

CARE AND COOKING OF VEGETABLES.

Vegetables do not indeed rank so high in the dietetic scale as fruits and meats; even though some philosophers have succeeded (according to their own statements) in extracting sunbeams from cucumbers, and have attained aldermanic corpulency upon turnips fried in water. Yet in their subordinate position they are desirable, not only because they furnish us with a large variety of cheap and healthy dishes, but for the stimulus they often give the appetite towards the proper enjoyment of animal food, while they sometimes render good service in palliating or correcting the injurious effects of a too carnivorous diet. They are generally considered the least important articles of our food, and consequently receive slight attention. The reverse should be the case. As much thought and care must be bestowed upon the management of vegetables as upon that of the choicest fruits, or there will be great waste of their nutritive qualities, and their highest uses fail of development.

At the harvesting of vegetables pains should be taken to keep all half-ripened and sound productions free from contact with the unsound or diseased,—a decaying turnip or onion, a blighted potato, a "lousy" cabbage—may infect and ruin a whole winter's stock.

Most roots give signs of their maturity in the changed color or dryness of their foliage. They should then be dug or pulled from the soil, left in the sun till dry, and then kept from heat and moisture till they are cooked.

All roots should be taken within doors before the chilly nights of autumn; for if frost-bitten they are sure to decay quickly. But they must be kept as cold as possible short of freezing.

Potatoes and onions are less liable to rot when kept perfectly dry and cool. All other roots need the slight moisture of sand or gravel about and upon them to prevent them from shrivelling; turnips and beets, especially, require this.

Carrots should be covered with sand or ashes; parsnips the same. These last if not needed during the winter, may remain till spring in the soil where they grow, as the frost has less effect upon them than upon other roots. Cabbages also can remain where they will freeze if they are kept in that condition till they are used. Freezing mellows and sweetens them; but they decay soon after thawing. They retain their freshness longest if transplanted from the field before the frost comes, to a trench, about a foot deep, in the cellar. Their roots should be watered occasionally. Cauliflowers need the same management. Set celery in deeper trenches in the darkest part of the cellar.

Sweet potatoes keep best packed in saw-dust in a cool, dark and dry closet. Pumpkins and squashes should be kept dry and moderately warm. If squashes get touched by the frost, to prevent their entire waste, pare them immediately and remove their seeds; then cut them into pieces of a convenient size. Slice these to half an inch thickness, and spread them on dishes or cloths in the sunshine, or string them and hang them in a sunny window or about the kitchen chimney to dry. Soak them in warm water till soft before stewing.

Green corn may be dried for winter use, retaining its excellence unimpaired if well cared for during the process of drying. None but the real sweet corn should be dried. Remove the husk and scald the corn just enough to set or coagulate its milk; then with a knife clear the kernels from the cob and spread them thinly on a cloth in the sunshine where there is plenty of air. Stir the kernels about, or shake them to another cloth every morning till they are dry; a week of good weather will dry them. Keep this dried corn in

tight paper bags till needed; and soak in warm water over night before using. Green beans and peas taken from their pods and spread and dried, and kept in the same manner are very nice. Many persons can them; but it is less trouble to preserve them in this way, and they are equally as good.

The most common of our vegetables, and that which is the most useful, is the potato—the Irish potato as it is called to distinguish it from the sweet or Carolina potato; but it is of American origin. It was carried from Virginia to England in 1556, by Sir Walter Raleigh, and from its resemblance to the Batatas, (afterward called sweet potato) which had been long known there as a dainty, it was given its name—slightly modified. For many years it was only used in the preparation of sweet meats and comfits; not until the latter part of the seventeenth century did it get into use as an article of ordinary food. The first potatoes that were raised in New England grew in Framingham, Mass. They were planted by Martha Buckminster Curtis, a famous "female merchant" of Boston.

The potato though not very nutritious, is easily digested when properly cooked, and hence has become almost as indispensable a portion of daily food as wheaten bread. But the disease which has infested certain species of the potato during the past few years, has done much to check its consumption, perhaps to our advantage, for it has been plainly demonstrated that a diet of this vegetable is unfavorable to mental and moral development; those who subsist mainly upon it, or who partake of it freely,—as the Irish in their native country—are much below the average in intellect and correct conduct. Still, used in connection with other vegetables, and as an accompaniment to fish and meats, in moderate quantities it does no harm.

The best way to cook potatoes is unquestionably the old-fashioned method of roasting them, rolled in paper, under the ashes of a wood fire. Next to this comes baking in a quick oven. They are good boiled or fried, or—*disguised* in some of the one hundred and four ways in which a Yankee has recently outwitted a Frenchman, who boasted that he could cook an egg in greater variety than he his favorite tuber. But Jonathan gained the case and won a bet by a plurality of just one recipe.

To boil potatoes: Fill a kettle with water just sufficient to cover the potatoes,—and no more Heat the water till it boils. Throw in an even teaspoonful of salt for a dozen common sized potatoes. Have your potatoes washed clean, then put them into the boiling water. Keep a brisk fire, that they shall boil without cessation. At the end of twenty minutes try them with a fork. If nearly cooked, (while there is yet a bone in them) turn off the water, leave off the kettle cover and set them over the fire for five or ten minutes; or else take them from the kettle and lay them in the stove oven for the same length of time. Cooked thus they will be dry and mealy. The salt not only seasons them, but hardens their skin, so that they are less liable to break in removing from the kettle. If put into water that does not boil, or if allowed to cease boiling they will be watery.

Old potatoes (those that have been kept through the winter) should be freed from their sprouts, as these secrete a poisonous juice in boiling. They should also be pared and kept immersed in cold water for an hour previous to boiling. Then if boiled in salted water and dried as mentioned, on the kettle or the stove oven, they will lose that waxy appearance which generally characterizes them.

A nice way to prepare boiled potatoes for the table is to dip them into beaten egg, sift over them pounded cracker or dried bread crumbs, and then brown them in the stove or range oven.

Mashed potatoes are an excellent accompaniment to roast fowls or pork. For this dish boil the potatoes till soft—from half an hour to forty mintues, according to the time of the year—new potatoes cook much sooner than old. Mash them with a rolling-pin upon a moulding-board, or pound them in a mortar. For a dozen potatoes heat, while mashing them, a pint of milk or cream, in which melt a square inch of butter and a little salt. When the milk boils stir in the mashed potatoes. Mix the whole thoroughly, then put it into a crockery dish that it will fill to heaping; smooth the top with a knife—and, if you please, beat the yolks of two eggs and pour over it—but it is very good without. Set it into the stove or range oven till browned—five minutes will suffice with a good oven—and then take it to the table in the same dish.

Baked potatoes, to be good, should be cooked as quickly as possible without burning. They require an oven heated as for baking bread. Twenty minutes should bake them, and they should be eaten immediately—they become heavy as they cool.

Cold boiled potatoes sliced and fried in fresh pork or beef fat are very desirable at breakfast. Cut the slices evenly, a quarter of an inch thick, and brown them well on both sides. Use as little fat as will suffice—supply it as it lessens. The fat should be hot to begin with, and that to be supplied also. Sprinkle the slices on both sides with salt—a salt box with a perforated cover, like those commonly used for pepper, is very convenient for salting these as well as for flavoring meats while cooking.

Raw potatoes peeled and sliced very thin and fried in salt pork fat are a very appetizing and hearty dish. Heat the fat to boiling in a deep kettle, and then drop in a quantity of slices, as many as can be conveniently stirred about in the kettle. Stir and turn them till they are browned. Skim them into a colander to drain, and then take them in a deep dish immediately to the table.

Sweet potatoes are generally liked; they have

always been celebrated for promoting health and vigor of constitution, and are especially suitable for the diet of children, who naturally crave sweets. The soil and climate of New England seem unfavorable to the perfection of this vegetable, even the best varieties being deficient in saccharine matter when raised north of Virginia. But anything bearing their name is eaten with avidity. The best way to cook them is by baking; or, rather, by boiling till soft, peeling and then browning them in the oven—boiling removes the peculiar rank flavor that some have. If very large these potatoes should be cut lengthwise before cooking. They will cook in two-thirds the time of ordinary potatoes. Both sweet and common potatoes that are left from dinner are nice sliced thinly and toasted on a gridiron over hot coals for breakfast. Eat them with salt or butter.

The turnip, beside its use for flavoring broths and soups, is excellent boiled, mashed finely, and seasoned slightly with salt, pepper and batter, with any sort of meat. New turnips need only washing, all signs of worms cut away, and scraping with a sharp knife, before boiling—old ones require peeling. Boil them in fresh water, half an hour. If they are watery when done press them between two plates before mashing. The Germans and Dutch mash equal portions of potato and turnip, and season in the same manner. Either the white English turnip or the sweet yellow French turnip served in this way is desirable.

Beets are only admissible with salted meat and fish. New beets are boiled in half an hour, but winter beets require at least two hours boiling to make them tender. They should be washed carefully with a cloth, in order to remove all sand or soil without breaking the skin or removing their fine fibrous rootlets—which would cause great waste of juice and flavor. When soft enough to admit a fork easily they are done. Take them immediately into cold water—let them lie half a minute, and then with a slight pressure of the fingers slip off their skins. It is accomplished almost instantly, and much nicer than by scraping or peeling with a knife. Cut them in slices, lengthwise, butter them; or send them plain to the table. Baked beets are a favorite dish with the Spanish, but they have never suited the Yankee palate.

Carrots are seldom used except as flavoring for broths and soups, but they are very nutritious and palatable when well cooked. Boil them in their skins three quarters of an hour; then peel them and serve in the same manner as beets with boiled corned beef or salt fish. Or, after boiling them till very tender, mash them and season with a little cut parsley, pepper, butter and salt. Or, bake them an hour (having removed their skins by scraping—) in a pan,—with a little water and sugar strewn over them; and serve with butter while hot. Boiled carrots, rubbed through a hair seive, and mixed with milk—one cupful to a quart of milk—and three eggs well beaten, spiced with cinnamon and lemon, and sweetened with two tablespoonfuls of sugar, make excellent material for pies. Bake this in deep dishes with an under crust, like prepared pumpkin or squash.

Onions are a great addition to any sort of fresh meat, with salt-fish. Remove the dry outer coat, and boil them in *fresh* water three-quarters of an hour. Turn off the water three times while cooking them, and replace it with more, boiling hot. They should be well-covered with it. Boiled thus they will be of mild flavor. Serve them whole with butter and pepper; or chop them and stir them a few minutes with cream, and a little salt and pepper to make a stiff sauce. Or bake them half an hour in their skins. Then remove their skins and serve with butter. Cold boiled onions are nice fried in pork fat till they are well browned; and raw onions sliced thin and fried in salted lard or salt pork fat, just enough to prevent them from adhering to the pan, are a good accompaniment to veal or mutton chops.

Cabbages should have their loose leaves removed and be carefully searched for insects, as well as very thoroughly washed. Then divide them by slitting the stump end in quarters, to the centre of the head. They are best boiled in water slightly salted. The water must be boiling, and kept so. Enclose them in a thin cloth bag or net if other vegetables are boiled with them. Boil a large head an hour. Season with butter, eat with vinegar and pepper. Cut cold cabbbge very fine, and fry it in nice beef fat or lard,—just enough to move it easily in the pan. Sprinkle salt upon it, stir it, and brown it nicely, and turn it upon toasted white bread for breakfast.

Cold slaw or cabbage salad is made of raw cabbage. Two hours before it is needed, wash a close head and leave in cold water till dinner is nearly ready; then cut it into quarters, and these as thin as possible, and then chop as small as beans. Mix with this a little salt, pepper, vinegar and oil, according to your taste. Cabbage stumps throw out sprouts in the spring which make excellent salad, dressed in the same way; or serve as greens with corned beef,—boil them half an hour in a net with the meat.

Cauliflowers, being a delicate sort of cabbage, need about the same treatment. They are improved by soaking an hour in cold water that is slightly salted before they are boiled. Boil them in fresh water—milk added to this water improves their flavor. When they are half done pour off the water and fill in more that is boiling.

Asparagus should have its stalks bound in bundles—about three inches through—with a fine tape or strip of strong cloth. Cut off the white ends. Boil it in salted water; it must be boiling hot, and kept so constantly. Half an hour will cook it. Toast slices of bread, spread them with butter and lay them in a dish. Then pour over them the water in which the asparagus has been boiled, and place the bunches carefully upon this toast, and

then cut the strings and loosen the stalks without breaking them. Lay upon them small shavings of butter, and take the dish immediately to the table. What is left from dinner is very acceptable at breakfast cut very fine and mixed with two or three beaten eggs and a little butter—scalded in a saucepan till the eggs are cooked, the whole thoroughly stirred, and then poured upon toasted bread.

Parsnips are nice boiled till tender; they require an hour—in salted water. Remove their skin, cut them lengthwise and butter and pepper them. They are good with fresh as well as salted meats. Fry them as you would cold potatoes, the next day. Some persons brown them in the stove oven after boiling them, before sending them to the table.

Cook egg-plants like turnips; or parboil them, slice them, and fry them in butter,—dipping them first in pulverized cracker and sprinkling salt and pepper over them; or bake them after they are sliced and seasoned with salt and pepper, placing them in a deep dish with layers of bread crumbs or pounded cracker.

Summer squashes should be boiled in a net. Put them in boiling water; from a half to three-quarters of an hour will cook them. Wring them as dry as possible by pressing between two plates. Remove the rind; mash, and season with butter, salt and pepper.

Winter squashes cut into convenient pieces; and take out the inside, except the filaments that are attached to the pulp—they are the sweetest part. Steam these pieces, or boil them in as little water —*fresh*—as possible. An hour will steam them; three-quarters boil them. When soft enough to bruise easily the squash is done. Peel it, taking off only the transparent skin of a soft shelled variety, and scraping the pulp from the rind of the harder kind. Mash the pulp fine, and season with salt, butter and pepper; a little sugar improves the flavor of a squash that has no natural sweetness. Boil and serve pumpkins in the same way; using the pulp if it is watery, as for summer squash. Two cupfuls of plainly boiled squash or pumpkins, one quart of milk and four eggs (or two eggs and one pounded cracker,) flavored with nutmeg and cinnamon—salt and sugar to taste—make excellent material for pies. Bake it with an under crust only, in deep dishes; or without a crust, having buttered the dish and sprinkled it thickly with fine Indian meal. These pies, baked with this substitute for a crust are very good for invalids.

Spinach is to be washed thoroughly and boiled in a net in salted water. This, as well as other greens, must have a great deal of water; or the water turned off and replaced, or it will be too bitter. Season it with butter; or serve it with melted butter with hard boiled egg chopped small added. It should accompany fresh meats.

Cabbage sprouts, young cabbage plants, young beets—both tops and roots—turnip tops, mustard, lettuce, dandelions, cowslips, radish leaves, sugar-weed, and young shoots of the currant bush, make good spring greens—to be eaten with salted meats. They need to be well searched for insects, and washed and boiled in salted water till they will sink to the bottom of the kettle.

Purslane is excellent either as a green for salted meats or dressed with butter for fresh meats. And celery, which is usually eaten raw as a salad, is sometimes boiled and dressed with cream and butter for the same.

Lettuce and peppergrass taken together make a good salad; or lettuce and nasturtian plants; or lettuce and tomatoes.

Celery is sometimes used with these, and radishes; but they are generally preferred by themselves. Wash them carefully and eat with salt, or salt and olive oil.

For making a salad the vegetables should be as crisp as possible, so it is best to pick them over and wash them and place them in cold water two or three hours before they are to be served. Cut the materials very small, and dress them with vinegar, salt, pepper, oil, powdered sugar, and mixed mustard. If you please add hard-boiled eggs—the whites cut in rings to ornament the top of the dish, the yolks mashed and mixed with oil and stirred among the cut vegetables.

Now a few words about corn, beans and peas, and we must leave the vegetables. Husk the corn and shell the beans and peas with clean hands. Do not wash them; only remove all kernels that are not perfectly healthy. Boil green corn in soft, fresh water; green beans and peas the same—as little as will cook them. Cook these as soon as possible after gathering. If they are not very young a little saleratus—a piece the size of a small bean to a gallon of water—will make them tender; for string beans this is frequently needful. Green corn on the cob will boil in half an hour. It is good baked fifteen minutes in a stove oven, or roasted five minutes on the coals.

An excellent dish, and one that suits children, is corn soup. To make this, cut the corn from the cob, and boil the cobs in fresh water half an hour. Skim out the cobs and put in the corn, and boil this the same length of time; then add one-third as much milk as you have of the water, a little salt and pepper; and a beaten egg if you please. Let it boil a few minutes, then stir in a little flour for thickening. Serve it hot.

Green peas will boil in half an hour. Put them to boil in cold water, without salt—salt hardens both beans and peas. Use only water enough to keep them from burning. Dress them with salt and butter. String beans cook in the same way—after having removed the string at each side of the pod, and cut or broken the pods into small pieces, —they are easily broken or "snapped," if not too old. String beans and peas may be mixed for boiling, or shelled beans and peas, or peas and asparagus. A small piece of salt pork seasons peas and beans nicely. It should be boiled with them

about ten minutes before they are done. Shelled beans, green peas, and green corn, that have been dried, should be soaked over night and then boiled precisely as when first gathered.

A very good addition to a dinner of boiled beef is a dish of beans—the common dried white beans—boiled in a bag with the meat. They should be soaked over night, the water turned off. Butter them before taking them to the table.

Bean or pea soup needs generally three hours to cook it well. One hour before it is done boil in another kettle a piece of salt pork, and, if you like, the same of corned beef, and just before taking up the soup mix the contents of the two kettles. Some persons pass the soup through a hair sieve. With pea soup this is always necessary, unless the hulls have been carefully skimmed from the surface of the liquor when they are first separated from the peas.

To bake beans or peas, soak them over night in cold water; turn this off in the morning, and parboil them in double their measure of fresh, soft water till their skin cracks. Then skim them into a deep earthern or iron pan, pour in a little molasses—a tablespoonful to a quart of beans—and enough boiling water to cover them. Then place among them, sinking it so that only the rind is visible, half a pound of salt pork, both fat and lean, the rind cut in strips. Bake them three hours at least, in a steady oven; they are better if baked six or even ten hours.

Succotash, or corn and bean soup, is made of dried corn and beans, in the same way as bean or pea soup. It is sometimes made of green corn and beans. In that case the cobs, after the corn has been cut from them, are boiled an hour to extract their juices, and in this liquor the corn and beans are stewed. Only the sweet corn should be used.

For the New England Farmer.

DOMESTIC RECEIPTS.

Receipt for Lincoln Pie, or Cake.

Take two-thirds cup of sour milk, two-thirds cup of cream, one-half cup of sugar, one teaspoonful each of salt and saleratus, flour enough to make a stiff batter, bake in a hot oven. While it is baking stew one and one-half cups dried raspberries, sweeten well and have plenty of juice. When the cake is done cut with a thin knife into two or three layers according to the thickness of your cake; put one on a warm plate and put on a layer of sauce, another of cake, till all is prepared, send to the table and help yourself.

Blackberry or raspberry jam, or even dried apple sauce can be used instead of the dried raspberry.

MRS. J. E. D.

GOOD DOMESTIC RECEIPTS.

AN ECONOMICAL DISH.—Steam or boil some mealy potatoes; mash them with some butter or cream, season them, and place a layer at the bottom of a pie dish; upon this place a layer of finely chopped cold meat or fish of any kind, well seasoned; then add another layer of potatoes, and continue alternating these with those until the dish is filled. Smooth down the top, strew bread crumbs upon it, and bake until well-browned. A small quantity of meat serves in this manner to make a nice presentable little dish.

PHEASANT, PARTRIDGE, OR GROUSE PIE IN A DISH.—Pick and singe two pheasants, or four partridges or grouse; cut off the legs at the knee; season with pepper, salt, chopped parsley, thyme and mushrooms. Lay a veal steak and a slice of ham at the bottom of the dish; put the partridge in, and a pint of good broth. Put puff daste on the edge of the dish, and cover with the same; brush over with egg, and bake an hour; or place them in a raised crust.

CLAM FRITTERS.—Take twenty-five clams and chop them fine, leaving out the juice; four eggs beaten, one cup of sour cream (if you have no cream, use one cup of buttermilk, and a piece of butter the size of an egg, melted and well mixed); one cup of flour, one small spoonful of saleratus. Then fry in butter, and spread them well with good sweet butter when you take them out of the frying-pan.